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The Labour Party and Nationalisation

THE amendment concerning transport, to the Labour Party policy statement "Challenge to Britain" passed at the party conference at Margate last week, though vaguely worded, adds little to the party's declared aims. The policy statement already provided for re-nationalisation of such road haulage units as are needed to secure a co-ordinated transport system. The amendment proposes the removal of restrictions preventing the British Transport Commission from developing an "integrated" system of railway and road transport and to give the Commission powers to reorganise road passenger services. The former proposal does not affect the party's intention to re-nationalise some part of road haulage, but seems to strengthen the Commission's hand in the matter of compulsory acquisition of road haulage assets. What else is intended is not clear. The present Government has done more than any recent administration to help the Commission in the clauses as to railway charges introduced by the Minister of Transport, Mr. Alan Lennox-Boyd, into the Transport Act, 1953, and the Labour Party Conference amendment seems hardly to envisage legislation in that respect. No doubt some form of centralisation of railway management is intended; but that must depend on the degree of decentralisation in the reorganisation of the railways that eventually emerges under the present Act. It is not clear whether the necessity has been grasped in Labour circles, which include many railwaymen, of leaving the railways undisturbed by future political upheavals. The amendment as to road passenger services doubtless relates to the "area schemes" on which a beginning was made by the Labour Government. The refusal of the conference by large majorities to add further proposals for nationalisation to those contained in "Challenge to Britain" is welcome. The policy statement already advocates nationalisation of a number of key machine tool firms. To disturb—to say the least—the highly efficient machine tool industry, which at present is faced with serious competition, is bad enough and it is satisfactory that the conference saw the folly of tampering with other vitally important industries, such as locomotive and rolling stock manufacture, which already are efficiently managed.

Transport Service

THE importance of transport as a factor in industry was emphasised recently by Mr. C. E. R. Sherrington, Director of the Research Information Division, British Transport Commission, when he addressed the Nottingham branch of the Industrial Transport Association on the subject of transport service. He assessed the aims which all concerned in moving passengers by rail or road should have in view, stressing frequency and speed of service with punctuality as necessary to ensure a profit. In the case of freight traffic he pointed out that the essential requirements for successful operation were reliability, reasonable rates and transits, absence of loss and damage, and co-operation between the trader and the carrier. In the U.S.A. co-operation between the railways and their customers had been brought about through the Regional Shippers' Advisory Board scheme, which had worked well for some years. The President of one Board had called it "the railroads' best friend and severest critic"; the criticism was, however, constructive and co-operation both continuous and effective. Mr. Sherrington also outlined the nature of the work done by the research organisation set up by the main-line railway companies in 1924 and continued since nationalisation by the British Transport Commission, which has been of the utmost importance in increasing railway efficiency.

First Class Abolished in India

BY October 1 it was expected that all first class accommodation on the Indian railways would be withdrawn. Latterly the first class has contributed only some 3 per cent of passenger revenue, and the loss should be more than made good by the increased revenue per ton hauled with the greater number of second class passengers per coach. On the other hand, travel in new, air-conditioned coaches, for which the first class fare *plus* a supplement depending on the type of accommodation occupied is charged, is becoming more and more popular. At present there are only about 40 of these coaches, built in Indian railway workshops and allocated to the most important services on the six railways, but they are being steadily added to, if not perhaps as rapidly as the railways would wish in view of the public demand. No new first class stock has been built for some years. Presumably that which is still serviceable will be converted to second class by the simple expedient of fitting upper berths.

International Passenger Timetable Conference

A MAJOR problem confronting the International Timetable & Through Carriage Conference, which opened in Athens earlier this week, is the problem of frontier formalities. These when they do not cause unpunctuality, increase tedium and show railways to disadvantage compared with air and, more significantly, international motorcoach travel; although, when traffic at an airport or road frontier is heavy, the delays caused by Customs and immigration examinations are proportionately greater than, say, at Dover

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Marine or Basle Central Stations, where the railway and associated officials have developed considerable skill in handling heavy traffic. With rehabilitation completed on most railways, it is problematical how far next summer's passenger timetables, the main task of the conference, will include drastic accelerations apart from those occasioned by further electrification in France, Belgium, and elsewhere. An important change in main routes is the development of the Gedser-Grossenbrode train ferry between Denmark and Western Germany. The work of the conference is aggravated by the impossibility of determining the trends of next year's holiday traffic, which depend on political and other imponderable factors. Delegates on their journeys to and from Athens can see the magnificent work of postwar reconstruction on the main line of the Hellenic State Railways, the host administration.

Punctuality in the Summer Passenger Services

THE passenger train punctuality figures of British Railways for the four weeks ended July 11 cover the first four weeks entirely within the period of the summer timetable effective from June 8. The percentage of express steam trains arriving on time was 54·5, against the corresponding figure for 1952 of 51·1, while the percentage of arrivals within five minutes of booked time was 75·8, compared with last year's figure of 73·2. The percentage of express electric trains arriving on time was 76·4, compared with the 1952 figure of 73·9, and the corresponding figures for arrivals within five minutes of booked time were 94·1 per cent and 93·5 per cent respectively. On-time arrivals for all expresses were 55·9 per cent compared with the 1952 figure of 52·6, while the percentages of arrivals within five minutes of booked times were 76·9 and 74·5 respectively. The total of other trains, steam and electric, arriving on time was 81·2, compared with 79·9 in 1952. In view of the many accelerations embodied in last summer's timetable and the consequent heavier demands on the operating and motive power departments, these results are encouraging, and go far to justify the policy of accelerating long-distance trains.

South Indian Developments

NEARLY two-and-a-half years have passed since the Madras & Southern Mahratta, Mysore State, and South Indian were grouped as the Southern Railway. The diversity in physical characteristics, economic conditions, and languages in the areas served influenced the methods of each component system. Diversity still continues, but with a difference. The obstacles created by three separate administrative units in matters such as joint station working and routing of traffic with a complex system of charging *via* different interchange points have been removed; and the advantages of unified control are noticeable in locomotive and rolling stock user and greater economy in consumable stores. The flow of traffic formerly was between the ports of South India and the interior, and to a lesser extent from north to south. With greater emphasis on national economic self-sufficiency, the larger volume of traffic now is from north to south, without a balance movement northwards, as traffic originating in South India continues to move to ports; this has resulted in serious operating problems. The most serious handicap perhaps is the absence of a link between the northern and southern metre-gauge systems—though the Khandwa-Hingoli link is planned—and restricted capacity of the broad-gauge lines linking north and south.

Increased Traffic in Ceylon

THE policy of developing hitherto neglected areas of the island adopted by the Government of Ceylon has had its effect in increasing the goods traffic of the Ceylon Government Railway, which last year amounted to some 1,600,000 tons against 1,500,000 the previous year, attributable largely to movement of tractors, electric generators, and other development equipment. The railway itself, with a view to tapping new sources of traffic, has been introducing feeder services for both goods and passengers, operated in some cases under contract with private road transport operators, and successful efforts have been made to develop seasonal pilgrimage and festival passenger traffic. Nevertheless, the restrictions on rates and fares, which are mostly only 30-50 per cent above prewar, compared with much greater rises in costs, resulted in a working deficit of Rs. 12,000,000 for 1951-52, though the total receipts of Rs. 70,000,000 were a record. The International Bank for Reconstruction has urged an increase in charges, and a scheme is under preparation. Delay in implementing the Motor Traffic Act of 1951, which provides *inter alia* for a 60-mile restriction on road haulage parallel to railway routes, has lost much traffic to the C.G.R.

Dieselisation and New Rolling Stock

AN important factor in the development and handling of traffic has been the delivery in Ceylon of the Brush-Bagnall diesel-electric locomotives with Mirrlees engines. Some already are in service and have replaced steam locomotives on long-distance trains, though it was hoped recently to schedule them on regular runs with the introduction of the new timetable, in which advantage is being taken of the diesel's greater power of acceleration to improve the overall long-distance running times. The cautious policy in dieselisation already has proved successful in the operation of diesel railcars. Meanwhile passenger and goods vehicles have been delivered in the past few months, which are essential to plans for dealing with the increased traffic expected. In the important phase reached by the dominion in its economic development, the Ceylon Government Railway is considered a vital asset. To play its proper part, however, it must be freed from undue restrictions in charging economic rates and fares. If this is done, the future of the system is bright provided that world conditions do not interfere with the development of the island.

Belgian Diesel Order

APART from half a dozen shunters acquired from war surplus or left by the retreating Germans, the Belgian National Railways have made no use of diesel locomotives in contradistinction to their railcar policy which has resulted in nearly 150 cars at work and another 36 on order. But the enquiries issued earlier this year for main-line diesel locomotives have now resulted in two orders being placed for a total of 95 units of approximately 1,600 b.h.p. This is one of the first forward steps in the progressive policy following the appointment of Monsieur Marcel de Vos as General Manager, and it might be thought that such an order must lead to some curtailment of the electrification programme already intended to be spread over a period of many years despite rather general statements to the contrary. Cockerill and Anglo-Franco-Belge orders are both for units based on American practice; indeed, it is likely that the engine equipment in the A-F-B order will come from the U.S., whereas in the Cockerill order the engines will be built under licence at Seraing. An interesting point is that the price of the 108-ton Co-Co locomotives of A-F-B type is only 6 per cent higher per locomotive than that of the special 84-ton Bo-Bo locomotive offered by Cockerill.

Panel Apparatus at Small German Stations

WHILE it is usual to expect power interlocking to be applied to the larger signalling layouts, local circumstances frequently make it advisable to use it at quite small ones. Where electric power is readily obtainable and conditions at certain seasons make mechanical working difficult to keep free from interruption, as in Switzerland or the Northern countries, power working has of late years been preferred. It has been applied since the war to several of the smaller German stations and an interesting example is given in *Der Eisenbahn-Ingenieur* in an article by Herr H. Schütz. At Baal Station, on the München Gladbach-Aachen line, a single line crosses over, forming a two-level exchange

station, with a spur connecting the two routes. It was originally proposed to replace the signalling, much damaged in the war, with a central mechanical box, but the cost would have been considerable. Relay interlocking was therefore adopted, with the panel in the booking office, worked by the station supervisor. The more important points have machines and the remainder, infrequently used, have key locking. Track circuiting is used where the view is obscured, with guards' telephones to cover arrivals on the single line and advise that the tail lamp can be considered as "seen." All telephone messages are automatically recorded, for checking if required.

A 2-8-4 Design for East Africa

PARTICULAR interest attaches to the order, recorded in our Contracts and Tenders section this week, which the Vulcan Foundry Limited has received for 46 tender locomotives of the 2-8-4 wheel arrangement for the East African Railways & Harbours, as one of the large orders placed by that system to cater for increasing traffic. Though now quite common in Europe, where it first appeared in Austria in 1928 in a series of engines turned out from the Vienna Locomotive Works, and, as shown in our August 21 and 28 issues, widely adopted in the U.S.A., where the type was originated in 1925 by the Lima Locomotive Works, the 2-8-4 tender locomotive still is rare in the British Commonwealth. The few examples which we can call to mind on a Dominion or colonial railway are the "720" class of the South Australian Railways and, more recently, the 100 locomotives of class "24," incorporating a one-piece cast-steel frame, which the North British Locomotive Co. Ltd., has supplied to the South African Railways for use on sections laid with only 45-lb. rails; this firm also is executing an order for 26 2-8-4s for East Africa.

An Account of Stewardship

INCREASES in efficiency and reductions in costs which have enabled British Railways to meet their share of capital remuneration and the central charges of the British Transport Commission whilst giving better service, with some failure to win the confidence of either the public or the staff, were stated last Monday by Mr. John Elliot, Chairman of the London Transport Executive and late Chairman of the Railway Executive, to be major results of nearly six years nationalisation. He was delivering his Presidential address to the Institute of Transport. Central management for the railways, which took the form of the Railway Executive, was necessitated, he maintains, by the unification under the Act of 1947. The geographical plan of the six Regions largely followed organisations existing under the four main-line companies, which allowed day-to-day service to be given the more effectively. Even the unification of the L.M.S.R. and L.N.E.R. lines in Scotland was in agreement with a proposal in 1921 to unify the Scottish lines, not followed in grouping in 1923. The aim of the new organisation was unification so as to increase efficiency, and production of railway net receipts to cover capital and central charges whilst carrying on and improving services. This had to be done in the largely war-time conditions obtaining in 1948. Whilst the Regions carried on services, the Railway Executive used their specialised knowledge in determining future standards in conjunction with the specialist Regional officers. This method, he states, produces results more quickly than would have been possible if each Region had been largely autonomous from the start, and there has been a continuous move towards decentralisation since 1948; the four main-line railways, he points out, went through the same cycle of changing emphasis after grouping.

After quoting statistics of increased operating efficiency, he emphasises that despite difficulties in forecasting traffic and price levels, British Railways in every year since their formation have earned a surplus of receipts over working expenses, including depreciation and renewals. Today British Railways are doing more work with less equipment and fewer staff than at any time in the history of railways in this country in peacetime. There still are many advantages of unification, he considers, if the British Transport Commission as now constituted decides to pursue them; much more time is needed before the railways are finally developed as a cohesive transport unit and many schemes such as for standardisation of track and rolling stock, can only fructify with time.

British Railways are unique in density of traffic; the passenger mileage is more than on any other European railway system; and they carry twice as many passengers as all the Class I railroads in the U.S.A. combined. The many improvements under unification include standardisation and inter-Regional use of motive power and rolling stock and operating improvements such as the through working of block trains. On the commercial side, wider use has been made of traffic surveys. Here the situation has changed radically since 1939, with coal now a first priority and altered trends in economic life. Unification has facilitated improvements in freight terminal working, interavailability of railway ships, even when account is taken of the requirements of individual services, standardisation of accounts and statistics, central purchasing and rationalisation of stores, and the uniform public relations and publicity and research organisations.

Technical achievements under unification include co-ordination of the mechanical workshop facilities inherited from the four railways, and reduction in the number of types of locomotive and in the number under repair. As to dieselisation, Mr. Elliot stresses that diesel and gas-turbine locomotives are still on trial, for exceptional operating advantages must be proved to overcome the much higher first cost. In electrification, he points to the experimental 50-cycle operation of the Lancaster-Morecambe-Heysham line and mentions plans for the future, but adds that the lack of progress today due to restrictions on capital expenditure is "heartbreaking." Major developments since 1948 in civil engineering are mechanisation of track equipment and adoption of standard flat bottom track. Track-circuiting and colour-light signalling have been extended, and he makes passing reference to the trials with the new type of A.T.C., now at an advanced stage. On the staff side one of the major factors has been that nationalisation was the result of political action desired by a majority of railwaymen. It will take much more time and education and goodwill on both sides before the relationship of men and management rests on enduring understanding. If there is not yet the same loyalty to British Railways as to the four companies, it was just the same, or worse, in the 1920s.

After declaring his belief in centralisation of essentials such as financial and charging policy, design and standards, he points to industrial concerns with equal insistence on central necessities, but more able than British Railways to decentralise in all else. It is here, he thinks, that the railways have stumbled—not failed—since unification. Despite their achievement under many handicaps, he feels that "we have somehow failed to make either our staff or our public as a whole happy about British Railways." One error was the setting up under the 1947 Act of separate Executives; in their effort to avoid over-centralisation at the Commission, the framers of the Act made it harder for the Commission's servants to be "transport men." Another error was the introduction of the functional system, for which railwaymen were not ready. Although it has worked well on the French, Canadian, and U.S.A. railways, it is hard to learn for those accustomed to compact company management of railways. It might have been wiser if the approach had been more gradual, "making a high degree of centralisation of major matters our ultimate aim instead of an imperious and urgent necessity." Chief Regional Officers were never intended by the Commission to be General Managers under the Act of 1947; general management was vested in the Executive with C.R.Os. their agents to see that Executive decisions were carried out, though recently C.R.Os. have been accorded a greater measure of authority.

As to the future, State-owned transport will meet fierce competition from private enterprise "lively, confident, in-

dividual, impatient of control, as yet uncertain as to what it really means to accept in the way of transport obligations." In this situation, nationalised transport is unlikely to forgo the advantages of standardisation of technical practice. There may again be "lopsided competition, with the dice loaded against those who must accept for all time the national obligation to carry and serve." To make competition fairer, the Minister of Transport, Mr. Alan Lennox-Boyd, has given the railways more freedom in charging under the Act of 1953. Yet this may not be enough. State-owned transport, with its many financial obligations, may fail to pay its way, with perhaps resultant subsidies and restrictive legislation, and Parliament may decide to cut its losses and sell off more, or all, of its transport assets.

Despite the advantages of monopoly, as shown in London Transport under Lord Ashfield and Frank Pick, the antagonism to it, he says, is healthy, which makes the Transport Act of 1953 the opportunity for the best of both transport worlds, State-owned and privately owned, to serve the nation best. Competition in theory is wasteful; yet Southern Railway enterprise owed much to competition. Parliament, Mr. Elliot urges, should approach transport problems with a greater sense of reality than in recent years. He is grateful to the small band of Parliamentarians on both sides who have made a study of transport, but the railway director-M.Ps. of the pre-nationalisation era are sadly missed.

Nigerian Railway Progress

THE Nigerian Railway is the second largest Colonial railway system and, until the fusion of the Kenya & Uganda and Tanganyika Railways in 1948 which resulted in the present East African Railways, it was the largest. It was formed in 1912 by amalgamation of the Lagos Government Railway with the Baro-Kano Railway, the former of these constituents having a history extending to the beginning of the century. Following the recent decision that there should be a change in the administration of the Nigerian Railway, a Commission headed by a Chairman & Chief Executive Officer was formed. The appointment of Colonel R. B. Emerson as the first holder of this office was recorded in our May 22 issue.

The outgoing General Manager is Mr. D. C. Woodward, biographical details of whom appear elsewhere in this issue, and who has just returned to England. He has been with the Nigerian Railway since 1928, a period during which there has been a marked development in the traffics and facilities of the railway. Comparisons of the tonnage and revenue figures for 1928 and the year ended March 31, 1953, show an increase of over a million tons and £7½ millions respectively. Until 1937, the Nigerian Railway operated as a Government Department, but after that year the accounts were declared separate and the railway was required to balance its own budget.

In 1934, control of the transportation system, which in 1928 had been delegated to the Superintendent of the Line, was transferred to the Chief Mechanical Engineer. In 1951, trains were speeded up by means of large-scale extension of semaphore signalling and the introduction of uni-directional running. The Chief Superintendent was appointed to take charge of all operating functions. This move was necessitated by the increased density of post-war traffic, and good results of the new organisation are already apparent. Another change which has been envisaged is the separation of commercial work from the other responsibilities of the Chief Superintendent and the formation of a special department charged with especial responsibility for this part of the railway operations in the colony.

During Mr. Woodward's term of office £500,000 has been spent in improving housing conditions for junior staff employed in all departments of the railway—club buildings, tennis courts and football grounds have also been provided at major depot stations, which have had a beneficial effect on staff relations and have resulted in increased efficiency. Further attempts to maintain the interest of the staff include the introduction of a mobile instructional train and training schemes to fit Nigerians for higher grades. Additional opportunities for Nigerians are afforded by a plan under which ten to fifteen selected staff are sent to the United Kingdom each year for special training.

An innovation on the Nigerian Railway and, in fact, throughout Africa, is the third-class refreshment coach, a development greatly appreciated by Nigerians. First-class sleeping coaches of an ultra-modern design, each complete with separate toilet, have been brought into service. The railway is an important purchaser of equipment from Britain, and orders to the extent of £1¼ million are at present in hand in the United Kingdom for coaching stock and wagons. The system is also awaiting the arrival of 42 locomotives, and it is planned to fit Leyland diesel engines to existing coaches to provide railcar services similar to those in use on the Ulster Transport Authority railways. The converted railway passenger stock will be based on Zaria, where the road motor fleet is maintained, and where there is already available skilled staff and the necessary equipment to keep the engines in good order.

Structural improvements include the remodelling and enlargement of all depot stations, the rebuilding of Lagos terminal and the enlargement of the Port of Lagos. The latter project includes the extension of Apapa Wharf by 2,500 ft. and the addition of five berths designed to accommodate modern shipping with adequate access and facilities for road as well as rail transport. It will be seen therefore that the new Commission will be able to base its administration on sound foundations.

Public Servants

GENEROUS acknowledgment of the services since transport was nationalised nearly six years ago, of the Chairmen and Members of the several Executives, was made by *The Times* last week in a leading article entitled "Public Servants." Outlining the changes in the organisation of publicly owned transport which took effect on October 1, including abolition of all the Executives except London Transport, the article states these to be the occasion for "public recognition of the real gratitude that the country owes to the men who, through five difficult years, have faithfully served on the bodies which have now disappeared."

The changes in organisation are expected to be the beginning of a brighter chapter in the transport story, it is pointed out, with more flexibility and decentralisation as the keys to greater efficiency. Many of the officers concerned continue to serve, and the new managing bodies under the Commission include a number of Members of the former Executives. This alone is some acknowledgment, the article adds, that most of the faults of the nationalised system since 1947 sprang from prescriptions of the Act which created it and were not in the main the responsibility of the men who had to work it. The difficulties of transport management when subject to political upheavals and interference are stated trenchantly: "Much sympathy indeed is owing to all those, whether members of the managing bodies or other transport administrators, whose task has been to keep services running through the convulsions of two major changes imposed by Parliament in barely half a decade. No doubt, on occasion, those in charge have taken wrong decisions or have approached their problems, as it seemed to some, in the wrong way. But far too often in the hot debates about the ownership and management of British transport criticism has spread unfairly to the public servants whose brief has, in fact, been given them by the politicians; and too seldom have their counsel and experience been duly weighed in the discussion."

The time has come for some of the officers concerned to retire, and brief mention is made of the work of Lord Hurcomb, who retired at the end of August as Chairman of the Commission; others, it is stated, do not wish to continue; and for others there is no place. The article

closes with the words: "A healthy nation criticizes; a just nation should also reflect on services rendered. As the Executives slip away to become a footnote in the history of transport administration, their Members deserve the public's thanks."

Canadian National Prospects

ON a tour of the western provinces of Canada recently, Mr. Donald Gordon, Chairman & President of the Canadian National Railways, said that with delivery of new equipment now being built, the passenger stock of the C.N.R. will be as modern as any in North America. In its appeal to the passenger public, the C.N.R. will, by 1954, have received a substantial part of one of the biggest passenger equipment orders that has ever been placed by any single railway, comprising 161 air-conditioned coaches, and 141 sleeping, restaurant, and parlour cars, at a capital cost of well over $50,000,000. The oldest branch line stock will be scrapped gradually and replaced by main line cars now in service. As to the losses on passenger working, he said that if losses on secondary passenger lines could be eliminated or substantially reduced, a profit for the passenger service as a whole might be conceived; another aspect of the low passenger receipts is the high cost of rolling stock. The C.N.R. has taken steps to reduce restaurant car costs, and new cars will be equipped with lunch counters and stools as an economic measure, with more modest meals served at prices attractive to passengers.

In calling for a reappraisal of the regulations governing the railways, Mr. Gordon recalled that the foundation of the present code of regulations was laid 50 years ago when the railways had a virtual monopoly in land transportation. Though advocating a re-examination of the general philosophy of railway controls he does not desire all regulations to be swept aside; on the contrary, he recognises that safety standards must be laid down and enforced and that public convenience and necessity deserve to be protected. There is ample evidence, he maintains, that the railways are keeping abreast of technological advances within the limits of their freedom and their financial capacity and this attitude has been chiefly responsible for substantial increases in operating efficiency. Technological progress is constantly improving railway service, reducing costs, and improving operating performances; and there has been what amounts to a revolution in equipment and operating methods, but it has come so gradually and so many changes have been behind the scenes that the public is hardly conscious of these improvements.

The dieselisation programme has been embarked on after careful study, Mr. Gordon points out, because of the economies thereby effected and the opportunity to improve services and cut costs. The C.N.R. is in no sense committed to universal adoption of any single type of motive power, and he emphasises that the diesel is not the last word in motive power. Research is being carried out in many quarters with the aim of developing new power plants, and the C.N.R. is keeping a close check on all developments. The gas turbine locomotive, when perfected, may prove superior to the diesel in selected services, particularly in the Canadian winter, when its power output will increase in the low temperatures.

The mechanical handling of freight is another important development introduced at major terminals. The activity of the C.N.R. in industrial development promotes the economic growth of those areas it serves, and a contribution similar to economic expansion is made through the company's colonisation and agriculture work. In 1952, the Canadian National handled two-thirds of the 165,000 immigrants who entered Canada from overseas which involved 260 special trains. In the same period, the railway settled over 2,000 families on agricultural land adjoining the railway. Summing up, Mr. Gordon is confident that as Canada grows, demands for railway transportation will grow in proportion; and as these opportunities for improvement increase, the pressure of economic necessity will continue to produce more changes and new ideas in the science of railroading.

Winter Train Services, Eastern and North Eastern Regions

THE winter train service programme of the Eastern and North Eastern Regions includes some interesting developments. Chief among these is the wide extension, as suggested in an editorial in our June 5 issue, of the facilities afforded by the new down morning and up evening businessmen's express trains between Kings Cross, Leeds, and Bradford. The down train, at 7.50 a.m. from Kings Cross, is now to run through to Newcastle, reaching Darlington at 12 noon and Newcastle at 12.46 p.m. The Leeds and Bradford portion calls additionally at Wakefield, and has a fast connection from there to Huddersfield, due at 11.43 a.m., while the main train calls at Retford, to give connection to Sheffield, where the arrival at 11 a.m. affords the fastest service between London and Sheffield (3 hr. 10 min.) that has operated since the war. This express now runs the 106·7 miles from Hitchin to Retford in 96 min. (66·7 m.p.h. and the fastest start to stop schedule in Great Britain), and the 76·3 miles from Doncaster to Darlington in 75 min. (61·0 m.p.h.). The additional stops make the times from London to Leeds and Bradford 14 min. longer than during the summer; Leeds is reached in 3 hr. 35 min.

In the reverse direction this express, leaving Newcastle at 5.3 p.m. and Darlington at 5.47 p.m., provides a useful relief to the up "Heart of Midlothian"; it runs from Darlington to Doncaster in 76 min. (60·2 m.p.h.), and picks up there the through portion which has left Bradford at 6.3 p.m. and Leeds at 6.26 p.m. (14 min. earlier than during the summer), and has called at Wakefield to provide a special connection from Huddersfield at 6 p.m. The combined train, leaving Doncaster at 7.16 p.m., then calls at Retford and gives connection to the 6.27 p.m. from Sheffield (though Sheffield passengers are involved in a 30 min. wait here); it covers the 106·7 miles from there to Hitchin in 99 min. (64·7 m.p.h.) and reaches Kings Cross at 10.8 p.m., 3 min. later than during the summer.

A similar facility for businessmen in the reverse direction is provided by a substantial acceleration of the 7.50 a.m. from Newcastle to Kings Cross, which now starts at 7.45 a.m., runs non-stop over the 156.0 miles from Darlington to Peterborough in 157 min. (59·6 m.p.h.), and reaches London at 12.46 p.m., 32 min. earlier than previously, and 41 min. earlier than last winter. There is also the up "Tees-Tyne Pullman," 9.25 a.m. from Newcastle and 2 p.m. into Kings Cross, which still retains its 231 min. non-stop run over the 232·3 miles from Darlington to London (60·3 m.p.h.). The 4.45 p.m. down "Tees-Tyne," however, is now to call at York, 188·2 miles in 192 min. (58·6 m.p.h.), and from there runs the 44·1 miles to Darlington in the unprecedented time, northbound, of 42 min. (63·0 m.p.h.), reaching Darlington (8.41 p.m.) and Newcastle (9.28 p.m.) 4 min. later than before. This winter, over the 44·1 miles between York and Darlington start to stop, three trains will be timed in 42 min., two in 43 min., four in 44 min., and seven in 45 min.

The 3.10 p.m. from Kings Cross to Newcastle is altered to leave at 3.20 p.m. and accelerated 13 min. to reach Newcastle at 8.30 p.m. The down "Queen of Scots," however, is slowed 5 min. to a time of 3 hr. 20 min. to Leeds, leaving London once again at 12 noon instead of 12.5 p.m.; and the down "Yorkshire Pullman" also is slowed 5 min. to Leeds (9.10 p.m.). The 6.18 p.m. down Leeds express now sheds its Hull portion at Grantham; the latter takes up from there the 8.45 p.m. semi-fast working to Doncaster, thereby enabling passengers from London to Newark and Retford to avoid changing at Grantham. The Leeds portion of this train is provided with a connection from Doncaster to Selby and York.

In the up direction, the 9.15 a.m. from York to Kings Cross leaves at 9.22 a.m., following instead of preceding the 7.45 a.m. from Newcastle. The 7.53 a.m. from Sunderland (9.47 a.m. from York) calls additionally at Selby and Grantham to replace the stops made previously by the 7.45 a.m. from Newcastle, and reaches Kings Cross at 1.35 p.m., 9 min. later. Owing to the re-insertion of recovery margins in all

the express train schedules through Peterborough, and the provision both of recovery margins into London and liberal time allowances for the Potters Bar station reconstruction works, many of the up expresses are allowed 5 min. more in their schedules; it is disappointing also to see the "Flying Scotsman" slowed by 9 min. down and no less than 17 min. up, to 7 hr. 37 min. and 7¼ hr. respectively between London and Edinburgh, with no additional stops, whereas the up "Heart of Midlothian" continues in its summer time of 7 hr. 50 min. to Kings Cross with five stops as compared with the "Flying Scotsman's" two only. The latter's 131 min. from Grantham to Kings Cross compares with 105½ min. only before the war.

Reference has been made already to new Huddersfield connections with London expresses at Wakefield; two others are provided also, at 7.32 a.m. and 9.30 a.m. from Huddersfield, connecting with the 7.50 a.m. ("West Riding") and 9.50 a.m. from Leeds to Kings Cross, and in the reverse direction at 7.15 and 9.5 p.m. from Wakefield (Westgate) to Huddersfield, connecting with the 3.45 p.m. ("West Riding") and 5.30 p.m. ("Yorkshire Pullman") from Kings Cross. These Huddersfield connections travel *via* Wakefield Kirkgate, reversing there. A new 2.40 p.m. from Penistone to Huddersfield and Bradford restores the prewar service from the Great Central line in connection with the 10 a.m. from Marylebone to Manchester. As is customary in winter, the 2.18 p.m. from Kings Cross to Leeds and Harrogate is suspended, and the 1.18 p.m. from Kings Cross to Leeds adds a Harrogate portion and calls additionally at Newark and Retford, reaching Leeds 20 min. later. The 8 a.m. from Kings Cross to Hull starts at 8.2[illegible] a.m., calls additionally at Huntingdon, and has a fast timing over the 33·1 miles from Grantham to Retford in 33 min. start to stop.

In the Great Eastern Section, the 9.10 a.m. from Yarmouth, all stations to Ipswich, leaves Yarmouth 21 min. later, and takes up from Ipswich the working of the 11.52 a.m. semi-fast from Ipswich to Liverpool Street. Otherwise, the G.E. services, with certain modifications and additional stops in the schedules of the Norwich trains made necessary by the seasonal withdrawal of certain of the Clacton even-interval trains, revert exactly to those of last winter, except that the 12.30 p.m. from Liverpool Street to Cromer, calling additionally at Colchester, is timed for a 400-ton load, and slowed by 12 min. to Norwich and 25 min. to Cromer. The new Cambridge line service introduced in July also remains unaltered save for the withdrawal of one or two seasonal trains, such as the 10.54 a.m. from Liverpool Street to Hunstanton. On Sunday evenings the 6.25 p.m. from Norwich to Liverpool Street *via* Ely, previously non-stop from there to London, now calls at Cambridge, which thus has three Sunday non-stop trains to Liverpool Street at 6.55, 7.15, and 8.7 p.m., in 68, 64, and 68 min. respectively, a considerably better service than on weekdays.

LETTERS TO THE EDITOR

(The Editor is not responsible for opinions of correspondents)

Riccall Crossing Accident

October 3

SIR,—The suggestion made by Mr. D. A. Wheatley in your issue of October 2, of a backlock on level-crossing gates, has its points. Would it be better to apply it to the gate lock lever? It might be applied some two or three minutes before the train reaches the crossing by track circuit or its equivalent.

Automatic indicators, one for each approach line, should operate if possible for some five minutes before the arrival of a train. An emergency release, if provided, should be subject to very stringent rules, as its use might destroy the object. Cases have occurred where it was wrongly assumed that there had been an instrument failure.

Yours faithfully,

COURTENAY BARRY

The Old Manor, Salisbury

Branch Lines

September 23

SIR,—Whatever may be said about the Isle of Wight railways, there are two points in Mr. E. V. M. Powell's letter in your issue of September 18 that make disquieting reading: first, the policy of defeat seemingly adopted by the Railway Executive when a branch line does not pay; and secondly, the increased tendency of the public to travel otherwise than by rail where possible; the two are closely linked.

Dunstable is a good example, for the single-track line between the small town of Leighton Buzzard and Luton, an industrial centre with a population of some 115,000, is something at which to laugh. A few businessmen use it in the morning and return by it at night, and the hours in between are not noticeable for trains or traffic. Yet this line could play a vital part in heavy passenger traffic between Dunstable and Luton, where the vagaries of the bus organisation are often most annoying. Here is much potential traffic, if the railways would drop their defeatist strategy of leaving things as they were before the buses got a real grip on traffic. Very few people of Dunstable ever think of going by train. A diesel railcar service, with halts at suitable places, including the Luton Town football ground, where the buses cannot cope with Saturday traffic, to be preceded by a sound advertising campaign, would make this line an asset to the public and the railways.

There must be other cases all over the country. Have the railway authorities really gone into the question of railcars on branch lines and their potential traffic returns compared with immediate cost?

Yours faithfully,

C. E. BOURNE

Hazelrene, 252, Luton Road, Dunstable

"Britannia" Class Locomotives

September 19

SIR,—Recent correspondence in your columns has prompted me to calculations of the increase in weight of these locomotives over the pre-nationalisation class "7" designs. Provided that such an increase in weight does not debar the locomotive from running over lines where they are most needed, it is reasonable to incorporate parts that are otherwise heavier than they might be, if their provision enables repairs costs to be decreased or the locomotive availability increased.

Given that No. 70,000 and her sisters are each 14½ tons heavier than one of the G.W.R. "Castle" class locomotives, it is possible to calculate roughly the extra cost that results from this increase in weight. The price of steel is at present about £40 a ton, but when labour costs for fabrication are included, is likely to be nearer £100 a ton. Thus, on this ground, the extra weight will cost £1,450. Although the provision of two cylinders only in the "Britannias" as against four in the "Castles" will decrease the overall cost considerably, this does not affect the basic argument, as it would be quite possible to build a two-cylinder class "7" locomotive weighing 80 tons.

Besides this first cost, the extra coal consumption that results from the added weight must be considered. British Railways' test bulletins have shown coal consumptions of less than 0.05 lb./ton-mile, but to cover the overall running of a locomotive, especially a mixed traffic one, during its life-time, a figure of 0.1 lb./ton-mile is taken as a some-

what pessimistic basis for calculation. Strictly speaking, the coal consumptions given in the bulletins refer only to trailing load, but it is reasonable to assume that the effect of added weight on the locomotive is of the same order. During its lifetime, each standard class "7" will in all probability run at least 2,500,000 miles. Taking the price of coal as £3 a ton, the "dynamic penalty" for the increased weight becomes £$\frac{2{,}500{,}000 \times 3 \times 0{\cdot}1 \times 14{\cdot}5}{2{,}240}$ or approximately £4,580.

The total penalty is thus just over £6,000, or roughly 25 per cent of the first cost of the locomotive. Provided therefore four of the new locomotives can do the work of five of the older class "7" engines, the increase in weight pays for itself, without any savings of maintenance being taken into account. This surely is not beyond the capabilities of the "Britannias."

There is one much less favourable aspect. On a recent visit to Liverpool Street, I watched one of the class having its fire cleaned while standing inside the longest platforms. Hundredweights of almost white-hot fire were being dropped into the ashpits and alongside the track from the rocking grate. How much of it was clinker there was no means of knowing, but the loss of heat must have been very great indeed: a loss that furthermore would not be included in the published test figures. What is however far more objectionable, is the apparent necessity to carry out such an operation in the platform area of an important station. On another occasion sulphur dioxide polluted the atmosphere badly from a similar operation. Corrosion of metals is directly proportional to the sulphur content of the atmosphere; so that on this count alone the practice is exceedingly bad and no doubt very costly. What cannot be assessed, however, is the adverse effect on passenger amenities.

Yours faithfully,

P. W. B. SEMMENS

52, Belle Vue Grove, Middlesbrough

Eastern Region Electrification

September 30

SIR,—Now that the Shenfield electrification is to be extended to Southend, what an opportunity there is for the engineer to show the world and also the passenger what can be done.

The rolling stock of the present electric service was a disappointment. It looked good and is good, in many respects, especially when standing still. On the move it grunts and groans, and the bogies in their unavailing efforts to leave the track shake the passenger and undermine his confidence.

Smooth-running motor-driven coaches can be built; we have ridden in them in Switzerland and in Italy. Why can't we have them here? Railway rolling stock lasts so very long that first cost can hardly be the reason. The new trains will carry millions and could be a wonderful advertisement. The authorities should build a vehicle that will glide sweetly through Essex for the next two decades, and which, in setting a new standard in railway travel, will justify the slogan "smooth as a Southend electric."

Yours faithfully,

G. B. HARMER

3, Veronique Gardens, Ilford

Discipline in the Signalbox

September 24

SIR,—The remarks of the coroner and jury at the inquest after the Irk Valley accident magnify it out of all proportion. It is hard to understand how the by no means universal "train approaching" bell signal can have much bearing on safety; it is concerned more with traffic regulation. The coroner might better have drawn attention to the possibility that a man who ignores one rule is the most likely to break another, though even this is not necessarily justified.

As to supervision of signalboxes, the court seemed to think that the train register book automatically reflects the signalman's every act or that his superiors know exactly what he was doing at 2 a.m. Surely the criticism should be that the quality of the individual is not always what it used to be?

Signalmen are chosen not only on the grounds of knowledge of the rules, but also because of their personal sense of responsibility. They are predominantly men who love their job; and as skilled workers neither merit nor expect the close supervision of the mere labourer. It would probably surprise the coroner to know that a signalman is entitled to request a superior to leave the box, once the official business is finished.

Stationmasters, however, are bound to visit their signalboxes at frequent intervals during their tour of duty, varying according to situation, and are encouraged to make occasional calls out of normal hours. District inspectors also must check from time to time that the men are conversant with smallest details of the rules. Generally speaking, therefore, there is little that can go wrong, especially if the team spirit be encouraged. Today, one does not supervise with the big stick. Discussion, sympathy, tact, even friendship, all go to achieve better results. I have heard it said that a good signalman will bend the rules when circumstances warrant it, but never break them; that is the spirit which leads to efficiency with safety, and comes of good supervision.

Yours faithfully,

PETER COLLINS
Stationmaster

Station House, South Luffenham, Oakham, Rutland

Simple Signalling Systems

September 19

SIR,—Mr. E. R. B. Roberts' letter in your September 18 issue prompts me to suggest a new signalling system, leaving the signalman free of all duties other than route selection, and the driver to concentrate on the punctual, comfortable, and economical running of his train.

To help the driver, all blocks would be of equal length, and all signals of the same multiaspect, type. The basic principle would be that one complete empty block should be ahead of any train, moving or stationary, *i.e., two* stop signals between a train and the next obstruction ahead. There would be no special inner and outer home, distant, starter, repeater signals, and so on.

Signal aspects, in succession, would be green, double yellow, yellow, double red, and single red. A.T.C. would give the usual indication, capable of being cancelled by the driver, at the two yellow aspects, but an automatic full brake application, not capable of cancellation until the train is stationary, with red aspects. A block need not be as long as the maximum train braking distance, but must be greater than half of this distance. The shorter and more numerous the blocks the more smoothly will traffic flow.

In normal running, a train should never approach a single red signal unless both a failure and an error have occurred simultaneously; moreover apart from purely operating circumstances, a driver would have no need to learn a route or remember the location of signals.

At the approaches to certain busy stations, a calling-on aspect, red and yellow, might be employed, with route indicators. A double red would clear to this only when a train is stationary at it, allowing the train to move slowly up to the single red ahead; this would be possible with track circuiting. A similar procedure would be employed on entering terminal stations.

Yours faithfully,

J. RODGERS

132, Worrin Road, Shenfield, Essex

ANTOFAGASTA (CHILI) & BOLIVIA RAILWAY: LOWER PROFITS.—The consolidated net revenue account for 1952 of the Antofagasta (Chili) & Bolivia Railway shows that net profits attributable to the group, before tax, were £925,266 as compared with the previous year's figure of £1,301,675.

THE SCRAP HEAP

What's in a Name?

A solicitor appearing at Westminster County Court on October 2 for the Road Haulage Executive asked leave to amend the title to the British Transport Commission. "The Road Haulage Executive ceased to exist yesterday," he said. "A rose by any other name would smell as sweet," commented the judge.

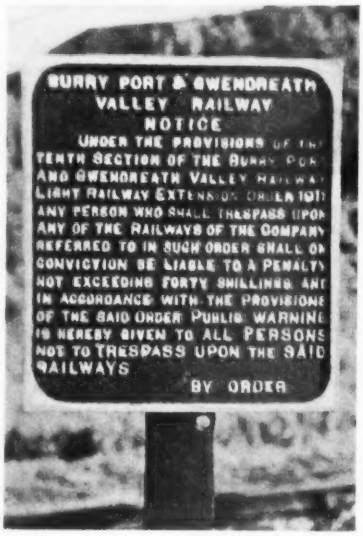
Railway Reorganisation

Critics of the hierarchy set up under nationalisation for the control of the former four railway companies based their criticism on the fact that, apart from the four boards of directors and the secretaries, the entire headquarters staff of the former railway companies was duplicated by an enormous Railway Executive staff. Sir John Benstead . . . has stressed that the Chief Regional Managers would have largely increased managerial functions.

A study of the interim railway reorganisation leads one to doubt whether any real change has been made. Apparently, the British Transport Commission has absorbed the Railway and other Executives and moved its headquarters to Marylebone Road. . . . There appears to have been no reduction of staff worth mentioning. May we look to General Sir Brian Robertson, in the final scheme for which he is responsible, to carry out faithfully the provision of the Transport Act, 1953—namely, that the Railway Executive is to be abolished followed by real delegation of authority to the Chief Regional Managers?—*Sir Felix J. C. Pole in a letter to "The Times."*

Wrong Spelling

The contract for casting the notice board illustrated below probably was not put out to local tender, according to the correspondent who sent us the photograph. In this and in other boards supplied to the Burry Port & Gwendraeth Valley Railway the name Gwendraeth is wrongly spelt. The passenger service over the former B.P. & G.V.R. was withdrawn between Burry Port and Cwmmawr on September 21.



Photo] [R. C. Riley

Name Gwendraeth wrongly spelt on B.P. & G.V.R. cast-iron notice board

Railway Stamps

I am told that interest in railway stamps is reviving, and I can thoroughly recommend them to would-be specialists. These stamps (2d. value) were first issued in 1891. They were issued by 106 railway companies in the United Kingdom—53 English, 12 Scots, 12 Welsh, and 29 Irish. By 1923 some had died, but others, including issues of three of the new big four main-line companies, were born. I have 11 new English names, and three Irish. With these, and 64 of the old list, I have 81 different lines "on cover." The routes, the platings, the cancellors, and the 1920 surcharges are crammed full of interest. —*Charles Jewell in "The Daily Telegraph."*

Door-to-Door

(See "The Times" leading article for September 5)

Dear Auntie *Times*, the other day
Commented in her kindly way
About the modern preference for
The joys of travel door-to-door.

That theme, so innocently meant
To furnish fruitful argument,
Inevitably must entail
Slight bickering twixt road and rail.

Have at thee, then! The "enemy"
May score on flexibility
And, for a strictly short-term run,
I'd find the journey rather fun.

For longer trips I'd not disdain
To use the good old puffer train;
Although it costs a little more
One doesn't end up saddle-sore!

How tempting nowadays to stress
Those prescient works of R.L.S.
He might have had much more to say
If travelling by road today.

For motor cars, with all their powers,
Crawl on for hours and hours and hours,
Hopefully striving to contrive
Eventually to arrive.

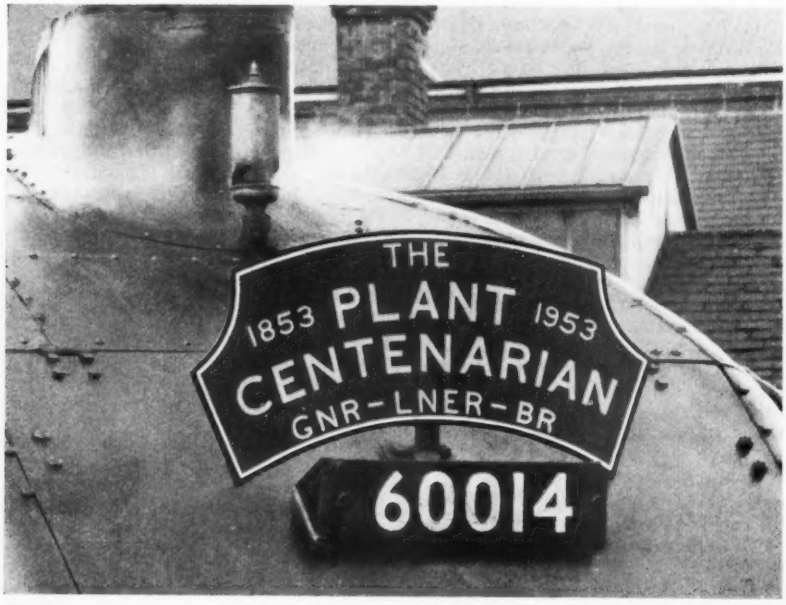
As twilight lengthens into night,
At long, long last they come in sight,
Hours after train addicts like me
Have stuffed ourselves with toast and tea.

Let Auntie *Times* say what she will,
I shall contest it all, until
Some kindly car decides to call
For me at *my* baronial hall!

Aye—there's the long and short of it,
Candour compels me to admit
My propaganda might be far
More potent if *I* owned a car!

A. B.

Doncaster Plant Centenary Excursion



Photo] [P. J. Kelley

Headboard of "Silver Link," which hauled the return excursion train from Doncaster to Kings Cross on September 20

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AUSTRALIA

"Overland" Expresses Diverted

At 5.25 a.m. on Sunday, September 13, twelve wagons of a fast goods from Adelaide to Melbourne laden with fruit were derailed near Kiata in Victoria, about 47 miles from the South Australian border. About 300 ft. of track on the main Melbourne-Adelaide line was damaged and the line was blocked for some 24 hr.

As a consequence, both the eastbound and westbound "Overland" expresses travelling between Adelaide and Melbourne were diverted through Mount Gambier, over the line from Wolseley which has recently been converted to broad gauge.

The two expresses, each hauled by twin diesel units, arrived at Mount Gambier on Monday morning, September 14; that from Adelaide stopped in the new marshalling yards at 5.14 a.m. and the diesels were run off in preparation for taking over the train from Melbourne. Shortly afterwards the latter pulled into Mount Gambier station and its engines went forward to pick up the train from Adelaide standing in the yards. Meanwhile the South Australian diesels were coupled to the train in the station and at 6.27 a.m. left for Adelaide, passing the train which they had just left in the yards.

At 6.36 a.m. the Victorian diesels drew the express from Adelaide from the yards through the station, eastwards towards Heywood in Victoria; from there the train travelled north to Ararat to reach the main line again. This was the first time a train from Adelaide had traversed the twelve miles of South Australian line running from Mount Gambier to the Victorian border.

TASMANIA

Rail-Road Competition

To offset the effects of severe competition by road services, the Tasmanian Transport Commission has a permit system in operation. A public vehicle licensed for operation within one traffic area only, may not be operated outside that area except in accordance with the conditions of a permit, which is issued at a charge based on the nature of the journey including the degree of competition with railways carrier or coach services.

For passenger vehicles, the maximum charges which may be imposed are ½d. per unit of the product of the length of the journey in miles and the number of passengers the vehicle is licensed to carry.

For goods-carrying vehicles the maximum charge is 0·4d. per unit of the product of the unladen weight in hundredweights and distance in miles the goods are carried. Special concessions are allowed in respect of the carriage of furniture, horses, livestock, seed potatoes, eggs, poultry, vegetables, scrap iron, fruit, cordials, straw and fat lambs.

NEW ZEALAND

Improving Passenger Services

In Taranaki, one of the richest dairying districts, passenger train services have been improved by the elimination of mixed trains and the acceleration of the local passenger trains between Wanganui and New Plymouth. By eliminating several unimportant stops, the schedules of the twice-weekly local trains have been reduced by half-an-hour each way, reducing the travelling time over the 107-mile route to 4 hr. 20 min. The Taranaki main line has gradients as steep as 1 in 35, and the tightly timed "Flyers," as they are known, are booked to make ten regular and 13 conditional stops in each direction. Between stops these local trains run at 50 m.p.h. wherever the terrain permits.

Theatre Excursions

An international ice show recently toured the principal cities of New Zealand and as it could not visit provincial cities because of the cost of setting up equipment for short seasons special passenger trains were chartered to enable out-of-town residents to see the metropolitan performances.

The scheme, which made theatrical and railway history in New Zealand, was first tried out while the company was playing at Auckland, and special trains were run from Hamilton, an important provincial city 86 miles to the south. The trains ran on three nights, leaving Hamilton at 5.16 p.m. and returning after the performance. The Auckland Transport Board arranged transport from Auckland railway station to the theatre and back, and before each train departed on the homeward journey theatre patrons had supper in the station buffet. The special low priced ticket issued to each passenger covered the rail journey and a reserved seat at the theatre. Accommodation on all three trains was sold out a few hours after bookings opened.

When the same theatrical company played in Wellington, similar arrangements were made for the residents of Palmerston North. Four trains were provided, each with accommodation for 650 passengers, and the 85-mile run was booked to be covered in 2 hr. 25 min., one minute faster than the schedule of Wellington-Auckland "Night Limited."

UNITED STATES

Per Diem Wagon Charges

A curious position has arisen in the New York area owing to the refusal of the New York, Susquehanna & Western Railroad to pay to other railways the $2 per diem rate (recently increased to $2·40) for the use of their wagons on its system, and as a result these railways, mostly in the Middle West and West, are suing the Susquehanna to enforce their claims.

In March, 1951, the latter proposed that this charge should be on a sliding scale, substantially reduced in the case of wagons built in earlier years, and only increased to $2 a day for wagons put in service since July, 1951. Two years later the Susquehanna proposed an in-

Diesel Working in Western Ireland

Diesel train built by Walker Bros. (Wigan) Ltd. comprising a 112 b.h.p. railcar and a special trailer on the 3-ft. gauge West Clare line of Coras Iompair Eireann

creased charge, owing to the increase in the cost of maintenance which had taken place since 1951; the $2, for example, was increased to $2·21, and the $1·20 for wagons put in service before 1945 to $1·33. By unilateral action, the Susquehanna has been paying on this basis, and the combined action by the Western railways is to recover the difference between these figures and their standard rates.

The Susquehanna has retorted by claiming damages of $3,900,000, under the U.S.A. anti-trust laws, on the ground that the Western railways have conspired to fix such charges and to enforce them on the smaller railways, which thereby are placed in a very difficult position because of the relatively small amount of freight traffic originating on their lines. The extent of the damages claimed is due in part to a contention by the Susquehanna that, in order to coerce the latter, the Western railways have diverted freight traffic to other competing railways. The Long Island Rail Road also is refusing to pay the recently increased per diem charge of $2·40 per wagon.

BRAZIL

Fusion of Railways

Early in September President Vargas approved the Brazil-United States Commission's project for re-equipping seven systems in the north and north-east: Rêde Viaçao Cearense (1,596 km.), Viaçao Ferrea Federal Leste Brasileira (2,556 km.), E.F. San Luis-Teresina (476 km.), E.F. Central do Piaui (191 km.), E.F. Mossoro (225 km.), E.F. Bahia e Minas (582 km.) and E.F. Nazaré (324 km.).

These systems, it is proposed, shall be re-formed as three large systems. One, with headquarters at Fortaleza, Ceara, will be a combination of the Rêde Viaçao Cearense, San Luis-Teresina and Central do Piaui systems. The second with headquarters at Recife, will comprise the R.F. do Nordeste, E.F. Sampaio Correa and E.F. Mossoro, and the third, with headquarters at Salvador, Bahia, will unite the Leste Brasileira, E.F. Nazaré, E.F. Bahia e Minas and E.F. Ilheus a Conquista.

A Bill is before Congress recommending the formation of these three systems. In the near future Campina Grande will be connected to Patos; Periperi, on the Central do Piaui, will be linked to Teresina, on the San Luis-Teresina Railway, and Campo Maior, near Teresina, in Piaui, will be connected to Oticica, on the Rêde Viaçao Cearense.

SWITZERLAND

"Helvetia Express" to be Extended

The "Helvetia Express," a railcar which has run daily between Zurich, Basle and Frankfurt since May 17, is to be extended to Hamburg on October 4. It will be one of the fastest daytime connections between Switzerland and Northern Germany, enabling passengers for Scandinavia to catch night trains.

HUNGARY

Mechanising Track-Laying

Mechanisation of track-laying is to be much extended during the next three years. At present about ten per cent of the work is mechanised, but by 1956 it is expected 35 per cent will be done by machine.

The present method is to pre-assemble rails and sleepers and then to lay them as a complete 36 m. formation by mobile cranes running on temporary rails beside the track. Attention is being given to a machine designed by a Soviet engineer, Platov. It consists of a crane running on the new track as it is laid. The prefabricated rail sections are in wagons behind it; the crane lifts the section from behind, drops it on to the ballast ahead, where it is fixed, and then the crane moves forward to repeat the operation. This machine lays 500 m. of track an hour.

Ballast cleaning and replacement is also being mechanised. The State Railways, which already use four Matisa tamping machines, have ordered two large-capacity ballast cleaning machines from Matisa.

FRANCE

Handling Bicycles at Stations

During the holiday months the S.N.C.F. handles a considerable bicycle traffic both at Paris and provincial stations. At the Paris termini the movement of the bicycles from the parcels office to the train has been solved by the use of tractors hauling trailers, but at many provincial stations it has been necessary, until recently, to move them individually by hand.

As the result of a staff suggestion a special type of platform trolley has been designed which can accommodate either ten bicycles, or four bicycles and two motorised bicycles, or four bicycles and a quantity of baggage. This trolley, which consists of a framework of light steel tubes mounted on a pair of bicycle-type wheels, can be wheeled about by one man. The top section of the framework is equipped with a number of hooks from which the bicycles are suspended by their front wheels; the framework is collapsible.

The apparatus has been approved for use on all Regions and ten trolleys are on order for the Western Region and ten for the Northern Region.

Publications Received

The World's Great Bridges. H. Shirley Smith. London: Phoenix House, Ltd., 38, William IV Street, W.C.2. 8¼ in. × 5¼ in. 180 pp. Illustrated. Price 15s. —Though written so simply as to be understood by and to interest the layman, this a comprehensive record of bridge-building. A novel note is struck by the account of bridge-building by British engineers not only at home but throughout the world, sometimes with untrained labour and with only the simplest plant. The author's vivid descriptions of such episodes as the engineers' great duel with the Ganges in the various and so-far successful attempts to guide its flow towards and under the great Hardinge railway bridge are enthralling, but much of the remainder of the text is little less interesting. Most of the great bridges of the world are well described and illustrated, and such methods of construction as caisson-sinking, superstructure-erection, and details and bridges are clearly explained by diagrams. Modern practice is shown in descriptions of pre-stressing of concrete, wind-tunnel testing with models, the design of future bridges, and the use of motion-recording instruments.

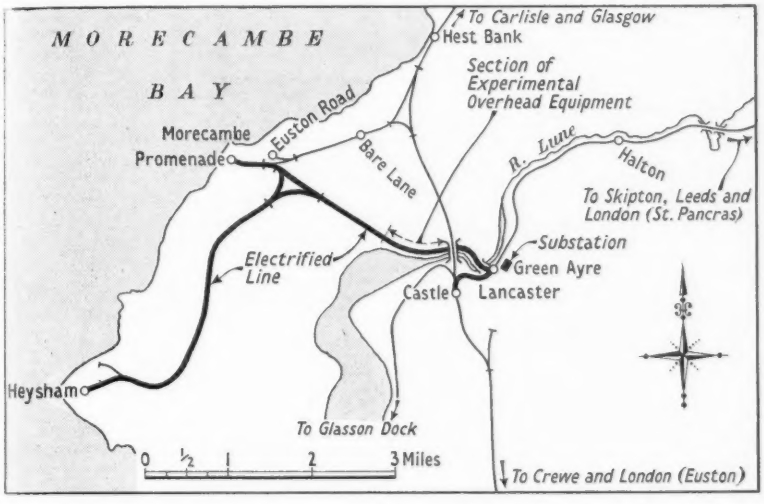
Trains Annual, 1954. Edited by Cecil J. Allen. Hampton Court: Ian Allan Limited, Craven House. 9¾ in. × 7¼ in. 96 pp. Illustrated. Price 9s. 6d. net.—In its eighth volume, "Trains Annual" has departed from the photogravure illustrations of the preceding editions and all pictures are now on art paper, to the advantage of reproduction. The fourteen articles are as varied as readers of this annual have come to expect. Those interested in overseas railways are well catered for, with articles on the "Simplon-Orient" express, rack railways, and the Chicago-Twin Cities high-speed services. An account of the South Wales railways before 1923, and reminiscences of the Brighton and South Eastern in steam days, will delight the nostalgic. Unusual accidents, "On the Footplate," the new signalbox at York, Southampton Docks, and the effect on the railways of the floods of last January are the subjects of other articles, and there is also an account of the London-Birmingham two-hour services.

Winter Sports, published by Thos. Cook & Son Ltd. and Dean & Dawson Ltd. 8½ in. × 5½ in. 120 pp. Illustrated. Paper covers.—A complete guide to skiing holidays in over 100 resorts in Switzerland, France, Austria, Italy, Germany, Norway, Sweden, Spain, and Yugoslavia, this publication covers the holiday from start to finish, including bookings, rail, air and sea travel and accommodation information. Skiing arrangements are fully described, both for the expert and the novice, and there are hints on suitable clothing. The many photographic illustrations include views of resorts and hotels. Complete lists are given of routes, fares, and hotel charges.

Lancaster-Morecambe-Heysham Electrification

Pioneer British single-phase a.c. line converted to operate at industrial frequency

THE conversion of the Lancaster-Morecambe-Heysham line of the London Midland Region of British Railways to the 50-cycle, single-phase a.c. system was completed at the end of last year, and a programme of trials has since been carried out to test the electrical equipment of the line, and determine the effects of this system of electrification on the power supply and other services, such as telecommunications and signalling. Full electric operation of the local passenger train services was restored on August 17 last.



Map showing lines in Lancaster, Morecambe and Heysham district

The line, some nine route-miles and 20 track-miles in length, was first electrified by the former Midland Railway in 1908 as an experiment to test the use for electric traction in this country of alternating current at 25 cycles, supplied at 6·6 kV. to an overhead contact wire. A description of the original electrification appeared in our June 12 and 19, 1908, issues.

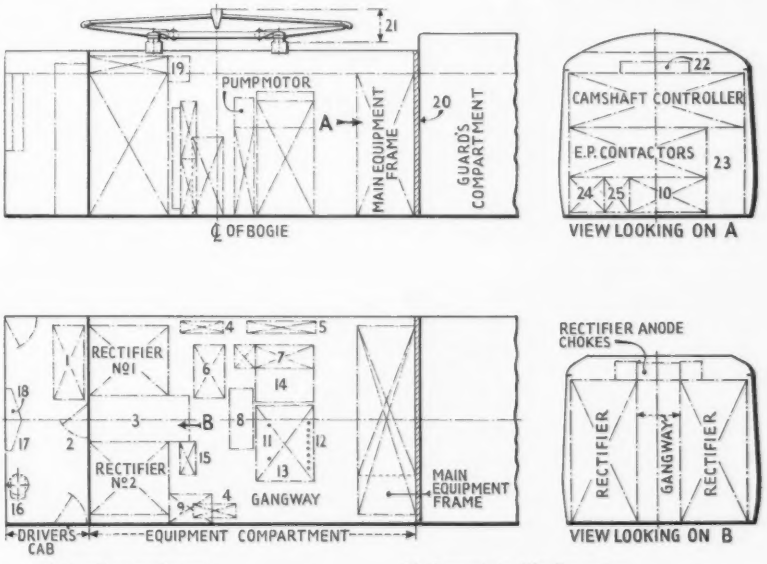
The length re-electrified corresponds to that of the original electrification. It begins at Lancaster Castle Station, on the Euston-Carlisle main line, and curves sharply down at 1 in 78-70, on a single line, to join the former Midland line from Leeds and Skipton at Lancaster Green Ayre Station, where reversal is necessary. Becoming double track, it then crosses the River Lune on a nine-chain curve, passes at right angles under the West Coast main line, and runs across open country to Torrisholme, where the line to Heysham forms a triangular junction, and thence to Morecambe Promenade, which is a terminus. Trains from Lancaster Castle to Heysham run into and out of Morecambe Promenade, thus reversing the direction of running for the second time. Except at the Lancaster end the gradients are slight, but the route is subject to strong gales at times, which provide a severe test for the equipment.

Because of their age, the original trains had to be withdrawn from service in 1951, but the overhead equipment was in relatively good condition and quite suitable for use at a higher frequency.

In view of recent technical progress in the design of 50-cycle train equipment, British Railways decided to carry out a trial electrification using this system, and selected the Lancaster-Morecambe-Heysham line as a convenient and economical proving ground. The work has been carried out under the direction of Mr. R. A. Riddles, then Member of the Railway Executive for Mechanical & Electrical Engineering, as a joint experiment in association with British overhead equipment and electrical manufacturers. Mr. J. C. L. Train, Member, British Transport Commission, and then Railway Executive Member for Civil and S. & T. Engineering, was responsible for the investigation into interference to signalling and telecommunications plant, for the cabling of the overhead telephone and signalling wires, and for modifications to track circuits.

Substations

A new substation, taking a supply from the North Western Electricity Board, has been built at Green Ayre Station, Lancaster, to replace the old 25-cycle motor generator frequency conversion plant at Heysham Harbour Sub-



1. Auxiliary equipment
2. Compartment access door interlocked with pantograph
3. Gantry supporting 4 rectifier anode chokes and 2 rectifier fan motor condensers
4. Electrically-operated shutters (inlet)
5. Electrically-operated shutters (outlet)
6. D.C. reactor
7. Oil cooler
8. 6,600V H.T. equipment frame
9. Motor cut-out switches
10. Relays, etc., of rectifiers
11. Primary terminals
12. Secondary terminals
13. Main rectifier transformer
14. Support stool for fan motor
15. Auto transformer
16. Master controller
17. Driver's control panel
18. Pantograph air compartment
19. Rectifier fan condenser
20. Access to contactors through bulkhead back covers of case (interlocked with pantograph)
21. Pantograph housed
22. Compressor rectifier
23. Emergency and service door (interlocked with pantograph)
24. Control rectifier
25. Control transformer

Arrangement of equipment compartment

station. The new building itself is a pre-cast concrete structure, of standard London Midland Region design. The equipment, supplied by the English Electric Co. Ltd., comprises two incoming oil circuit-breakers, two transformer oil circuit-breakers, two 6·6 kV./6·6 kV. type "ON" 833 kVA. single-phase transformers, and two track feeder oil circuit-breakers. The transformers may be operated in parallel, but will normally be used singly, one serving as a standby for the other. The track feeders have instantaneous over-current protection, and the other oil circuit-breakers have normal protection. The transformer and track feeder oil circuit-breakers are arranged for remote control, from an operating panel in Green Ayre Station Signalbox, some 50 yd. from the substation.

Overhead Equipment

A length of approximately 4,000 ft. of the original double track, wood pole and steel bridge type of portal construction between Green Ayre and Morecambe Promenade Stations was removed and replaced by British Insulated Callender's Cables Limited by light, hinged cantilever structures, separate for up and down lines.

The new equipment is designed for 20,000 volts, as it is probable that a.c. electrification would generally be carried out at a higher voltage than the 6·6 kV. used for the original electrification of the line and retained for convenience. A simple catenary construction is used, using a 7/·166 in. stranded, hard-drawn copper catenary and a single 0·166 sq. in. cadmium copper contact wire, which is suspended from the catenary by $\frac{3}{16}$ in. dia. semi-hard drawn copper dropper wire. Automatic tensioning by means of balance weights has been adopted, and the site chosen includes both curved and tangent track.

On the down line an overlap span has been installed in the centre of the length on the curved section of the track, so dividing the equipment into two individually weight-tensioned parts. The balance weights are installed at the overlap span. At the remote ends where it overlaps with the old fixed equipment the new equipment is fixed. On the up line the new equipment is anchored at the centre of the length by staying the mid point cantilever back to the masts of the adjacent structures on either side, and the balance weights are installed at the remote ends where the new equipment overlaps the old.

The contact wire is positively registered at each supporting point. On tangent track the catenary is retained over the centre line of the track while the contact wire is offset on either side of the centre line at alternate supports. On curved track the contact wire is offset towards the outside of the curve and is tangential to the centre line of the track at mid-span.

The proximity of the coast and the presence of steam traffic afford suitable conditions under which comparative tests can be made of the corrosion-resistant properties of several types of masts and protective treatments. The types of supporting masts which have been installed include rolled steel joists, steel broad flange beams, aluminium alloy broad flange beams, lattice steel, tubular steel, pre-stressed concrete, and creosoted wood.

The twelve different methods used to protect the masts against corrosion include galvanising, flame cleaning and painting, pickling and painting, shot blasting and metal spraying.

Some of the hinged cantilevers are fabricated from steel angles and tees, others from steel tubes, and others from aluminium alloy sections. Pin, cap and pin, and solid core type insulators are incorporated in various cantilever arrangements.

Rolling Stock

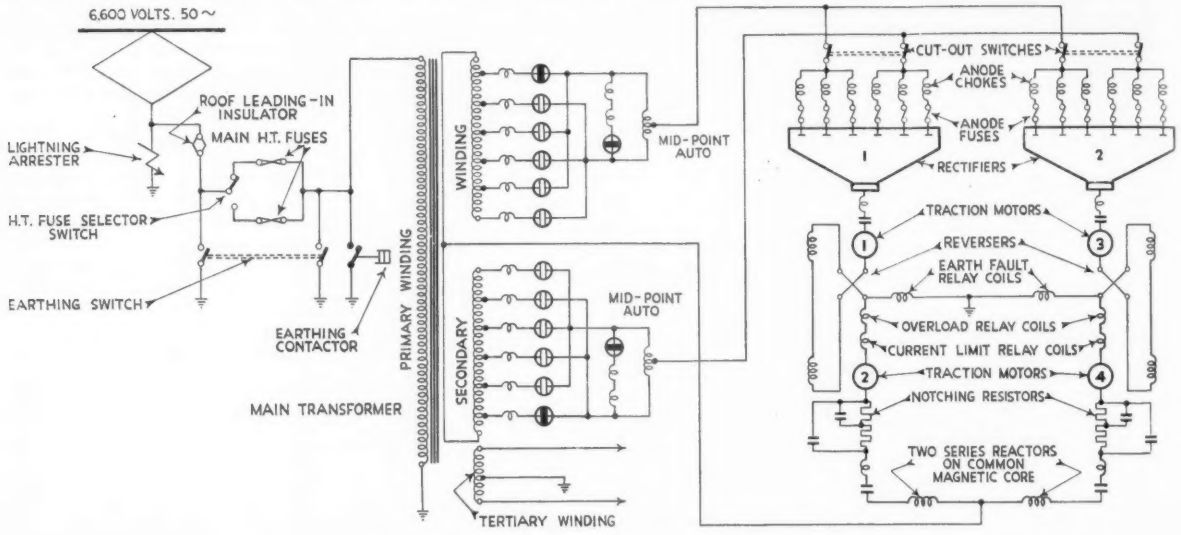
To provide rolling stock in place of the original train sets, three of the three-coach electric train sets made surplus by the closing to passenger traffic in 1940 of the Willesden-Earls Court line have been used. These sets were built by the Metropolitan Carriage, Wagon & Finance Company in 1914 and were originally fitted with Siemens electrical equipment. The sets were converted at the Wolverton Carriage & Wagon Works of the London Midland Region.

Each train set comprises motor coach, trailer coach, and driving trailer coach, of the following leading dimensions:—

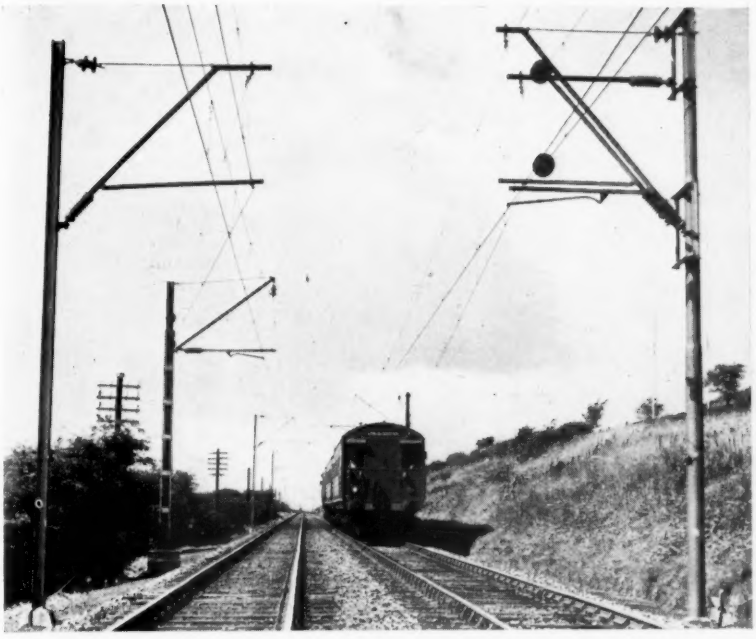
—	Motor coach	Trailer and driving trailer coaches
Length over headstocks ...	57 ft.	57 ft.
Bogie centres	37 ft. 6 in.	38 ft.
Bogie wheelbase	8 ft. 9 in.	9 ft.
Width over body at waist ...	9 ft.	9 ft.
Height from rail to top of roof	12 ft.	12 ft.

The stock having been originally built to operate on the fourth-rail system, fairly extensive rebuilding of the motor coach body has been necessary because of the provision of a larger electrical equipment compartment, and of a well-type flat roof for housing the pantograph.

The length of the equipment compartment has been increased from 8 ft. 4 in. to 15 ft. and the steel body framing pillars disposed to accommodate the motor-operated dampers for air circulation. The steel framed well roof extending over the driving and equipment compartments has been built as a complete removable unit, to facilitate erection and renewal of electrical gear. The floor plate of the equipment compartment and the partition between the driving and equipment compartments are steel. The partition between the equipment compartment and the guard's compartment is of timber, lined with asbestos on the equipment compartment side. At the top of this latter partition is fitted a shallow window giving a view of the



Basic diagram of power circuits for motor coach



Three-car train on section with experimental overhead equipment

well roof and enabling the pantograph to be observed in service. Separate compartments have been provided for the guard and for luggage, the latter compartments being fitted with double doors. The modifications have reduced the length of the passenger compartment and thus the seating capacity. All the original seats have been removed and replaced with transverse, tubular framed, coach-type double seats. Details of the original and modified seating capacity are as follows:—

—	Original seating	Revised seating
Motor coach	40	28
Trailer coach	66	62
Driving trailer coach ...	60	56
Total...	166	146

No structural alterations have been made to the passenger compartments of any of the coaches but the interior finishing has been renovated and lightened in colour. The roof and cornice light fittings have been removed and replaced by fittings of a more modern design, and a few have been repositioned to suit the modified seating. Most roof mouldings have been removed and flush-type ventilator undercaps fitted, and a much cleaner general appearance has been achieved. All interior metal work fittings are finished O.V.B.

All underframes have been overhauled, the existing conduit being removed and step boards and brackets modified to suit the general British Railways loading gauge. The disposition of equipment on the motor coach underframe has been entirely rearranged and has necessitated the fitting of numerous trimmers for mounting the details. The original Westinghouse brake has been retained, but the handbrake column and associated gear, originally fitted in the guard's compartment, have been removed, the handbrake in the driver's compartment being retained.

Fitting train line connection boxes on the ends of each coach has made it necessary to increase the buffer projections slightly at the close coupled ends, with a corresponding increase in drawbar connections, to give the requisite clearance on curves.

All bogies have been overhauled and slight modifications made to the motor bogie transoms and swing beams, to allow for the beam-type motor nose suspension adopted for this experimental stock.

Electrical Equipment

The electrical equipment of the three train sets has been supplied and erected for experimental purposes by the English Electric Co. Ltd., using components which were readily available. It is not representative of future equipment, which would be underframe mounted to avoid loss of seating capacity.

Power at 6·6 kV., 50 cycle, is collected from the overhead contact wire by a single pantograph and fed to the equipment compartment which contains most of the power equipment, including transformer, rectifiers, control equipment, also part of the associated auxiliaries. Mounted under the coach are the electro-pneumatic motor reverser, notching and field divert resistances, the motor-driven compressor and the 24-volt battery for emergency lighting of the equipment compartment.

The motor coach is driven by four axle-suspended self-ventilated traction motors, which are d.c. series-wound machines, each of 215 h.p. at the one-hour rating. This rating was chosen to give an equipment capable of high acceleration for experimental purposes.

High-tension a.c. power is collected by a single pantograph and is fed to series-wound direct-current traction motors through a transformer and rectifiers. The transformer has a double secondary winding, each half of the winding being provided with tappings.

There are two rectifiers, each having six anodes, paralleled in groups of three. Each rectifier is of the sealed steel-tank, air-cooled, mercury-arc type, fitted with heaters to ensure correct operation when starting up from cold. Each rectifier feeds two traction motors connected in series with the mid-

Former d.c. motor coach being converted for operation at 50 cycles

Renovated interior of one of the coaches

point earthed. The transformer contains a tertiary winding, 230-0-230 volts, for auxiliary services. Train lighting is supplied through separate step-down transformers at 24 volts working off the 230-volt supply. Train heating is obtained from the tertiary winding at 460 volts. The compressor used in connection with the air brakes is driven by a standard d.c. motor supplied through a dry plate rectifier with smoothing circuit.

Control of the traction motors is obtained by varying the transformer secondary voltage by an on-load tap-changer, consisting of two sets of cam-operated contactors and auto-transformers with mid-point tappings.

There is a high-tension fuse between the pantograph and the primary of the power transformer in the high-tension compartment, and a lightning arrester is fitted on the roof. Overload protection is provided by over-current relays and contactors in the d.c. circuits, and six anode fuses are provided for each rectifier. Some smoothing of the d.c. current is obtained by the use of a d.c. reactor consisting of two series reactors on a common magnetic core.

The power transformer referred to is oil cooled, and the cooling circuit includes a radiator with its motor-operated fan. The equipment compartment is fitted with electrically-operated shutters under the control of thermostats so as to control the incoming and outgoing air flow of the compartment. Thus, the temperature of the air used for cooling the rectifiers is automatically controlled. The equipments are designed so that the train sets may be operated in multiple.

Operation

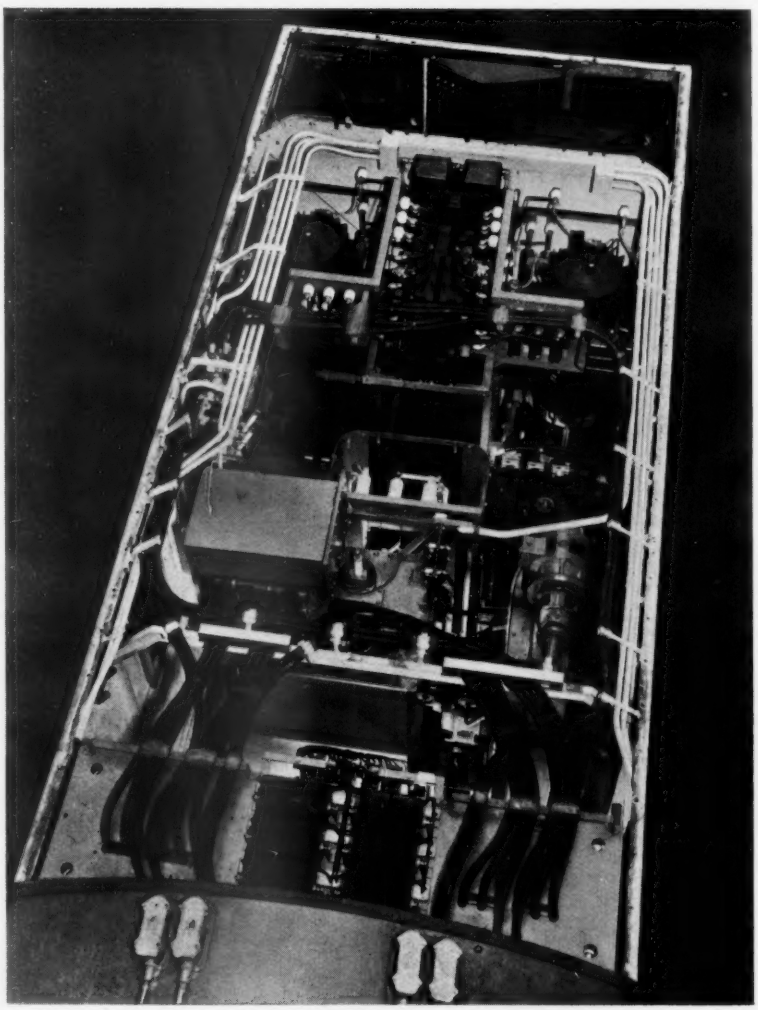
The motorman's cab contains a master controller, air brake valve, motorman's control and indication panel, and a cupboard for the fuses, contactors, and other equipment, which are used in the auxiliary and control circuits.

The pantograph is raised by residual air pressure in the pantograph reservoir, or, failing this, by a foot pump, and contact with the overhead line energises the rectifier transformer through the 6·6-kV. fuse.

The tertiary voltage is now available for train lighting and heating, and also for the control supply, battery charger, compressor supply and auxiliaries. The compressor starts up under the control of its governor and rectifier heaters are energised automatically. Provided the control supply switches are closed, the driver waits for the air pressure to build up, by which time the rectifiers have warmed up.

The train is driven from the master controller in exactly the same manner as a standard d.c. equipment. The removable key is first inserted, the master switch thrown to the "on" position, the reverser handle to "forward" or "reverse" and then the main power handle to the shunting, half voltage, full voltage, or weak field position. Accel-

(*Continued on page* 408)



Overhead view of equipment compartment with roof removed

Bensenville, U.S.A., Marshalling Yard

Designed to handle all Milwaukee Road traffic in and out of Chicago

General view of 70 classification tracks from a retarder tower, in which the operator at his console is controlling speeds of cuts, according to a list

WHAT is claimed to be the largest and most modern marshalling yard in the world is now being completed by the Chicago, Milwaukee, St. Paul & Pacific Railroad at Bensenville, some 17 miles west of the Chicago loop district. Its construction is estimated to cost $5,500,000, and work began in February 1953. It has 70 classification tracks, each holding from 52 to 102 wagons, the total capacity being 5,311. Over 500 men are employed on permanent way, buildings, signalling, retarders, communications, and control works.

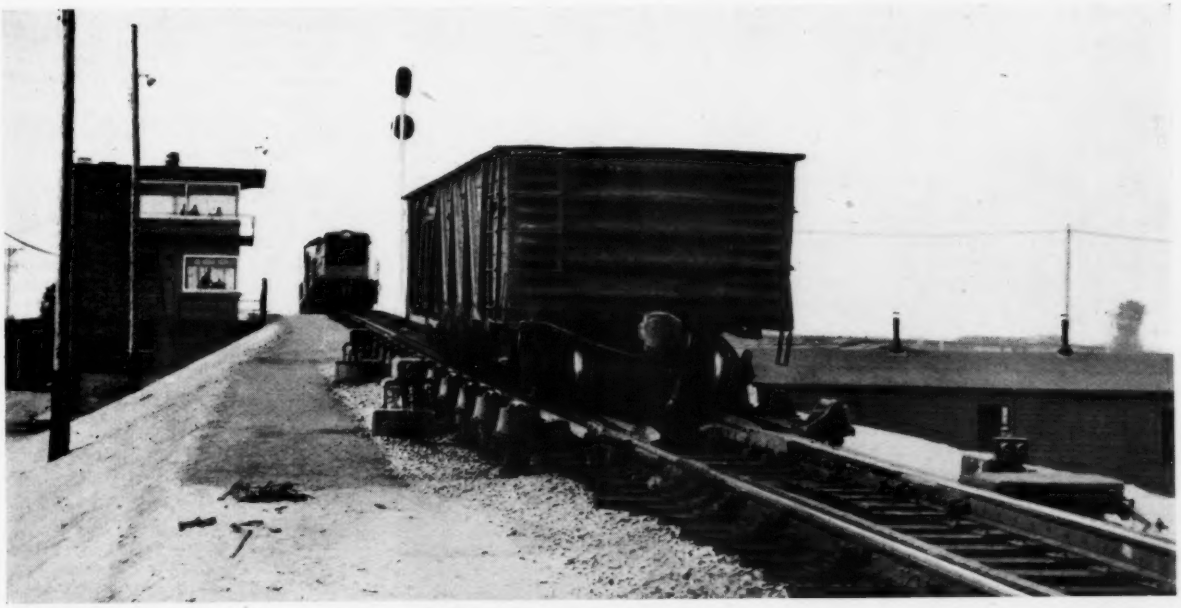
All wagons to, from, and through the Chicago area will pass through this yard. On entry, their numbers are recorded on a tape recorder, from which lists are prepared showing the weight, description of contents, and the track number to which each wagon is to be shunted over the hump; copies of these lists are sent by pneumatic tubes to all concerned.

Further along a receiving road each wagon is inspected and axlebox lids are opened for lubrication. Diesel locomotives push the trains up to the hump, 20 ft. above the normal yard level, the wagons passing over devices for detecting flaws in the brake-rigging and also a lubricating installation, where oil is squirted into the axleboxes.

At the crest of the hump trains are uncoupled into cuts, each of which runs forward by gravity into one of the 70 tracks, its destination being determined, according to his copy of the relevant list, by a controller seated at a desk-type routing panel in a ground-level office at the hump, control being effected by push buttons setting the route. An illuminated diagram shows the operator how he has set up in advance, in consecutive order, the next five cuts.

Speed Control

Half way down the gravity gradient the speed of each cut is controlled by an operator in a tower 30 ft. above the tracks. There are two of these towers, each with wide windows, in which the



A single-wagon cut, the last vehicle of a 123-wagon train, passing over a master retarder fitted with a re-railer in case of derailment

Yardmaster in tower office near crest of hump in general control. He marks lists to show routing, and is in communication with locomotives and ground staff and all controls

operators are seated at desk-type consoles, from which the retarders are operated. A diagram shows the part of the yard under the control of each retarder-operator and an illuminated panel indicates the next five routes set up by the controller. Six levers are provided on each console to vary the speed at which cuts will leave the retarders. A lever is pushed in one direction for heavy cut and reversed for a light one, to slow down each cut to the desired speed and regulate the spacing between cuts. There are master and intermediate retarders by which speeds of 6—12 m.p.h. are fixed, but cuts leave the final retarders at 4—10 m.p.h. according to their weight and running.

Yard Communication

The yard and its approaches from all directions are equipped with radio communications with the shunting engines, and with a paging and talk-back loud-speaker system to instruct the ground staff. The various offices and controls are linked by telephone and the pneumatic tube system. The yardmaster is in general control in his office near the crest of the hump. He marks the lists to show the number of the track into which each wagon is to be shunted, and is in direct communication with the controllers and operators by telephone and pneumatic tube with shunting engine drivers by radio, and with the ground staff by loudspeaker. The yard is floodlit for operations during the night.

Lancaster-Morecambe-Heysham Electrification

(*Concluded from page* 406)

eration is automatically controlled by a current limit relay up to whichever of the four running notches is chosen.

Principal data are:—

Line voltage (at no load)	6,600 volts
Line frequency	50 cycles/sec.
One hour rated output at wheels (allowing 10 per cent. line drop) ...	860 h.p.
One hour rated tractive effort (in IIfu field)	11,500 lb.
Average accelerating tractive effort ...	17,900 lb.
Wheel diameter (mean)	42 in.
Gear ratio	65/16
Maximum permissible speed for equipments	75 m.p.h.

Signalling and Telecommunications

In changing from the previous 25-cycle installation to the 50-cycle system, the higher load current and frequency with the use of rectifiers on the trains greatly increased interference to telecommunication and signalling circuits. Tests confirmed the need to replace the overhead communications route by means of buried cable. Two separate cables are provided for telecommunications and signalling circuits respectively. Both are lead covered, double steel tape armoured and served. The conductors of the 14-pair star quad air-spaced cable used for the telecommunication circuits are 40 lb./mile and are provided with a double tape copper screen below the lead sheath. In the signalling cable the conductors are 1/0·064 in. dia. with oil-impregnated paper insulation, the size of cable varying along the route between 12 and 48 conductors.

The change of frequency and increased load affected the existing track circuits. There were some 30 direct current, single rail track circuits working reasonably well when the maximum return traction current was low, but the increased return current of the new scheme necessitated alteration of the relays and of the feed end arrangements. The stray a.c. current in the track circuits has been limited by the insertion of a choke in the feed end, and the relays have been altered internally by providing a magnetic shunt and copper slugging so that alternating current would not energise them.

WINDERMERE STEAMERS: HEAVY SUMMER TRAFFIC.—The number of passengers carried by British Railways, London Midland Region steamers on Lake Windermere this season was 372,332, nearly 18,000 more than last year. This is a postwar record, and the more remarkable because the weather this year has not been favourable.

NEW HAMMER FORGE AT STEEL, PEECH & TOZER WORKS.—Operations have begun at the new hammer forge which Steel, Peech & Tozer, a branch of the United Steel Companies Limited, have built at Ickles works; the forge is designed to give increased production and to apply the latest techniques to the manufacture of railway axles. The new building consists of two bays, one 320 ft. long by 70 ft. wide and the other 240 ft. long by 55 ft. wide. Each bay is served by a 5-ton E.O.T. crane, fitted with a magnetic attachment. The principal items of equipment are a continuous gas-fired furnace, a 7 ton steam operated hammer, an electrically-operated mechanical manipulator, a second furnace and oil tank for heat treatment purposes, a straightener and cold sawing equipment. A 5-ton hammer and two batch-type furnaces are also included for general forging purposes. The layout of the equipment has been designed on continuous flow principles and permits an output exceeding one hundred axles per shift to be achieved.

TUBE INVESTMENTS LIMITED ACQUIRES ROUND OAK STEEL WORKS.—Tube Investments Limited has acquired the whole of the shares of the Round Oak Steel Works at Brierley Hill, Staffordshire, on the basis of the take-over price plus repayment of the loans to Round Oak by the Finance Corporation for Industry and the Realisation Agency, involving payment of £5,803,574 in all. It is intended that the Round Oak Steel Works shall continue to produce the types of steel with which it has long served its existing customers; with increased output from the new works capacity will also be provided for the manufacture of tube steels.

SOUTHERN REGION WINTER CONTINENTAL SERVICES.—With the ending of British Summer Time on October 4 Southern Region Continental Boat Trains, including the "Golden Arrow" and "Night Ferry" services, leave Victoria one hour earlier, except the Newhaven-Dieppe service which leaves at 9.5 a.m. instead of 9.30 a.m., and the afternoon Dover-Ostend service, at 12.30 p.m. instead of 2.30 p.m. The service from London to Paris *via* Southampton-Havre now leaves Waterloo at 7.30 p.m. instead of 9 p.m. This earlier departure enables first and second class passengers to connect with the 7 a.m. train from Havre, giving an arrival in Paris of 9.24 a.m. Continental services into London arrive at Victoria one hour earlier than previously with the exception of the "Night Ferry" which continues to arrive at 9.10 a.m. daily.

Tracklaying Completed Through New Woodhead Tunnel

Double line laid nine days ahead of schedule

Track-laying machine lowering prefabricated track on to prepared track bed

USING the machine specially developed by British Railways for laying track in tunnels, permanent way staff of British Railways civil engineering department on September 30 completed the laying of the double track through the new tunnel at Woodhead, on the Manchester-Sheffield main line of the former G.C.R. The job, which took seven weeks to complete, was finished nine days ahead of schedule. The men working in the tunnel, which is just over three miles long, laid 20,000 tons of ballast, 1,000 tons of rails, and 13,000 sleepers.

Machine for Tracklaying in Tunnels

The tracklaying machine consists of a bogie vehicle with two winches driven by compressed air; lengths of prefabricated track are lifted and lowered by means of cables and the jibs which project at right angles from the vehicle. The air compressor and reservoir for the winches are carried on an adjoining vehicle.

The next stage in the construction of the tunnel, which is now practically completed, will be the installation of cables, signalling equipment, and overhead wiring.

Associated with the electrification project, the decision to build the new tunnel was taken by the L.N.E.R. shortly before the second world war, though no contracts were placed before the end of hostilities. Final details were decided shortly before nationalisation and the work put in hand.

Estimated to cost £2,800,000, the new double-line tunnel supersedes the existing twin tunnels, the first of which was built in 1845. Because of age, both have become uneconomical to maintain. Parliamentary powers were obtained in 1947, and work began in the Spring of 1949. After the usual preliminary site works, tunnel driving was begun in the autumn of 1949, and at the same time a shaft was sunk on the open moor midway on the new tunnel line. The pilot tunnel, which is 12 ft. square, was enlarged to the full section, of width 31 ft. and height 24 ft., before lining with concrete throughout.

As expected, construction of the new tunnel has not been easy; beds of shale intersect the general sandstone formation with more than one ground fault encountered, and much of the tunnel length has had to be supported by steel ribs. Excavation was by blasting.

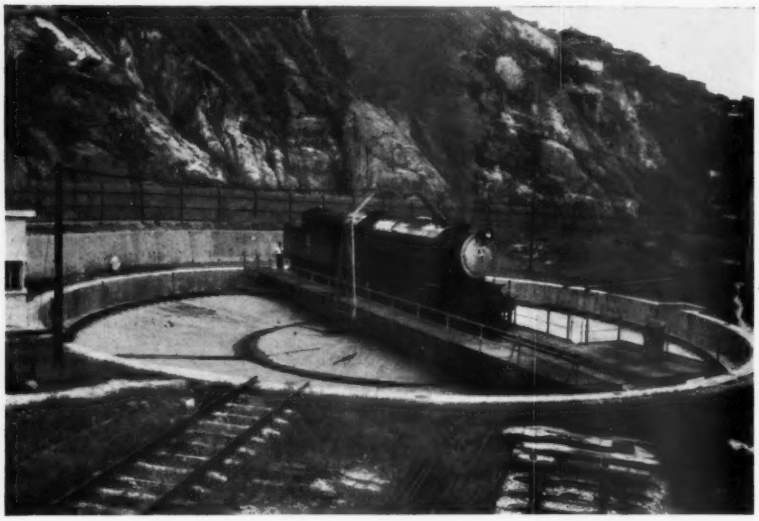
When the pilot tunnels driven from the foot of the shaft, 467 ft. deep, and from Dunford Bridge, met in April, 1951, thus completing the eastern half of the pilot tunnel, the error in alignment was found to be only just over ¼ in. Other works necessitated by construction of the tunnel comprised demolition and reconstruction of Woodhead and Dunford Bridge Stations, with new bridges and approaches. The isolated nature of the site entailed provision of accommodation for nearly 1,000 men, and a well-equipped camp, with canteens, cinema, sick bay, post office and other amenities, was built at the Dunford Bridge end.

View of tracks laid through new tunnel before completion of ballasting

SPECIAL TRAINS FOR SPORTING EVENTS AT BELFAST.—Six special trains left Glasgow St. Enoch for Stranraer Harbour in connection with the International football match between Ireland and Scotland and the British Bantam Weight Boxing Championship, between Peter Keenan and John Kelly, at Belfast. The specials were timed to leave at intervals between 7.0 p.m. and 1.0 a.m. and connected with additional sailings from Stranraer to Larne.

Kowloon-Canton Railway

Progress in postwar development on the British Section despite many difficulties



U.N.R.R.A. standard locomotive on 98-ft. turntable at Kowloon

TO obtain a clear picture of what has been accomplished in the way of rehabilitation on the British section of the Kowloon-Canton Railway from September, 1945, to the present day, it is necessary to recall that Hong Kong was situated in the American theatre of war during World War II and with the sudden ending of the war, little or no procurement planning had been undertaken. There was no priority for the Colonies and Hong Kong generally had to fend for itself and obtain supplies as best it could, often against keen competitive buying in the open market in the United Kingdom. The railway's machine shop had been practically stripped of machines, the locomotives had received no maintenance, coaches had been stripped of their interior fittings and many had no electric generators; many wagons were damaged and all rolling stock had been deprived of oil. Buildings were damaged by air attack, rails had been torn up and taken away, signalling equipment had been destroyed or stolen and there were no immediate supplies of coal, not only for the Railway, but for the power stations.

The first act was to recruit staff and old employees gradually began to drift back to work. They were undernourished and a food kitchen was started so that they would have no need to go back for a meal at midday as there was as yet no transport. As weeks went by more and more returned by various means, including a number by air and boat from the interior and the villages near Macao. Nevertheless many months passed before the man-hour output could be termed reasonably satisfactory. There were two reasons; undernourishment, and the go-slow movement built up during the war against the Japanese, which had become such a habit that it was hard to eradicate.

A further complication very soon after re-occupation was the arrival under the U.N.R.R.A. scheme of 1,500 knocked-down wagons from the Middle East for China. No arrangements had been made for their erection by the appropriate authorities and if the railway transit areas were not to become congested, it was essential that a start should be made on their assembly. Approval was therefore sought from the Regional U.N.R.R.A. Director at Canton and the wagons were put up in lots for erection by public tender; a tender board being formed from representatives of the British and Chinese Sections of the Railway and local U.N.R.R.A. and C.N.R.R.A. officials. The scheme worked so well that 800 had been erected in Hong Kong as against three in Shanghai of the quantity sent there. Thereafter they were used to load U.N.R.R.A. supplies to the interior. Their usefulness was soon reduced by the fact that they had chilled cast iron wheels without tyres, the surfaces of which developed flats which made them increasingly dangerous to run, and spare wheels were non-existent.

New Equipment

In 1946, the entire procurement situation was so bad that it was necessary for the General Manager to visit the United Kingdom with the Chief Mechanical Engineer to obtain coaches, wagons and workshop equipment. The equipment for the shops and the wagons have since been secured but the order for 34 coaches, later reduced to 19 on grounds of economy, have still not been received six years after ordering.

Altogether some 60 machines were secured for the machine shop. Some of the more important items purchased since 1945 include 12 lathes of different sizes, one Loudon wheel lathe, three grinding machines, one one-ton electro-pneumatic forging hammer, one gear hobbing machine, one 400-ton hydraulic wheel press, two planing machines, one sloting machine, two shapers, two screwing machines, and 195 wagons of various types.

(*Continued on page* 414)

Forty-ton covered steel wagons with transverse and coil springing

RAILWAY NEWS SECTION

PERSONAL

Before Mr. John Elliot left the Railway Executive to take up his new appointment as Chairman of London Transport Executive, a number of his assistants and staff who had been personally associated with him met in his room at 222, Marylebone Road, N.W.1, to give him their good wishes for the future, and to present him with a silver cigarette box.

General Manager of the recently-formed Great Northern Railway Board, was educated at Ranelagh School, Athlone. He entered the service of the Great Northern Railway in the Secretary's Department. He later transferred to the Chief Engineer's staff and was appointed Chief Clerk of this Department in 1933. In 1940 Mr. McCormick became Chief Clerk to the General Manager, and his next promotion, in 1943, was to the position to Assistant to

form of a bronze statuette of Pegasus, has been conferred on Sir Reginald Wilson for his Paper on "The Framework of Public Transport" presented to the recent Congress of the Institute of Transport at Glasgow.

Mr. Mohamed Ebrahim Ali Kizilbash, Deputy Manager, Bombay Port Trust Railway, has been appointed Manager, succeeding Mr. H. A. Gaydon.

Mr. D. C. Woodward
General Manager, Nigerian Railway, 1947-53

Mr. J. F. McCormick
Appointed Acting General Manager, Great Northern Railway Board

Mr. D. C. Woodward, C.M.G., General Manager, Nigerian Railway, whose retirement was recorded in our June 12 issue, was born on March 15, 1902, and was educated at St. Peter's Court, Broadstairs, and Christ's Hospital, Horsham. He joined the L.N.W.R. in 1918 as a probationer and, after experience in every branch of the Passenger, Goods and Operating Departments, was appointed Outdoor Assistant to the District Traffic Superintendent, Swansea (L.M.S.). In 1928, Mr. Woodward took up the appointment of Assistant Traffic Superintendent, Nigerian Railway. He was promoted to be District Traffic Superintendent in 1938; Deputy Chief Traffic Superintendent in 1942, Chief Superintendent in 1944, Acting General Manager in 1946 and General Manager in 1947. He was awarded the C.M.G. in 1949.

Mr. J. F. McCormick, Managerial Executive Officer, Great Northern Railway (Ireland), who has been appointed Acting the General Manager. He became Managerial Executive Officer of the Company in 1949. Mr. McCormick's varied responsibilities have given him a wide experience of the administration of the extensive rail and road passenger and freight services of the G.N.R. His work in the field of labour relations has been notable in recent years. Mr. McCormick is a member of the Institute of Transport.

Colonel Cyril Banks, M.B.E., M.P., who was appointed an additional Parliamentary Private Secretary to the Minister of Transport to help during the passage of the Transport Bill, has now relinquished this appointment.

On Monday, October 5, at a meeting in London of the Institute of Transport, the Immediate Past President, Mr. C. T. Brunner, will present the Institute Triennial Award of Merit to Sir Reginald Wilson, Member of the British Transport Commission. The award, which takes the

Mr. P. N. Talati has been appointed Controller of Stores, Southern Railway of India, in succession to Mr. E. La V. Parisot.

Ministry of Transport & Civil Aviation

The Rt. Hon. Alan Lennox-Boyd, M.P., Minister of Transport & Civil Aviation, has appointed Mr. S. M. A. Banister and Mr. O. F. Gingell to be his joint Principal Private Secretaries and Mr. J. H. H. Baxter to be his Assistant Private Secretary.

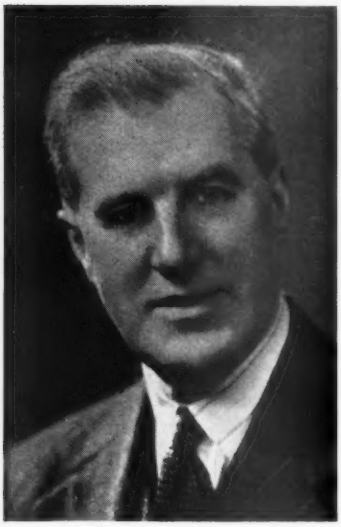
Mr. J. Gurney Braithwaite, M.P., Joint Parliamentary Secretary, has appointed Mr. J. H. Clement to be his Private Secretary.

Mr. John Profumo, O.B.E., M.P., Joint Parliamentary Secretary, has appointed Mr. J. L. Roberts to be his Private Secretary.

Sir Gilmour Jenkins, K.C.B., K.B.E., M.C., Permanent Secretary, has appointed Miss D. E. Brown to be his Private Secretary.

Mr. C. Birch

Appointed District Operating Superintendent, Sunderland, N.E. Region



Mr. S. J. R. Allwood

Principal Assistant (Electrical) to Mechanical & Electrical Engineer, Derby, 1950-53

Mr. H. G. W. Gaut

New Works Assistant to Operating Superintendent, Western Region, British Railways, 1945-53

Mr. C. Birch, District Operating Superintendent, Wakefield, North Eastern Region, British Railways, who, as recorded in our August 28 issue, has been appointed District Operating Superintendent, Sunderland, commenced his railway career in 1925 in the District Locomotive Superintendent's Office of the L.N.E.R. at Sheffield. In 1931 he moved to the District Superintendent's Office, Manchester, and, in 1932, he became a Traffic Apprentice, his period of training being spent in North-Eastern England. He was appointed Assistant Yardmaster, Stockton and Newport, in 1936; Yardmaster, Blyth, in 1937; and filled posts at Newcastle, Sunderland and Tyne Dock in 1938/39/40 before becoming Assistant to the District Superintendent, Newcastle, in 1941. In 1943 he became Head of Passenger Train Section, Superintendent's Office, York, and the following year was Head of Freight Train Section. In 1946 he was appointed Traffic Control Officer, Central Traffic Office, Marylebone, and, in 1947, Assistant to Operating Superintendent (Trains), Scottish Area, L.N.E.R. at Edinburgh. Leaving Edinburgh in August, 1950, he became District Operating Superintendent, Wakefield, the post he now vacates to take up his new post on Wearside.

Mr. S. J. R. Allwood, A.M.I.E.E., Principal Assistant (Electrical), to the Mechanical & Electrical Engineer, London Midland Region, British Railways, who is retiring on October 2, 1953, after over 50 years' service, commenced his railway career in the Electrical Section at Derby in March, 1903. He became Assistant Engineer at the Power Station in 1915, being promoted to Power House Superintendent in October, 1924. On the outbreak of the 1939-45 war, Mr. Allwood became Acting Area Electrical Engineer at Stonebridge Park, and continued in that position until April 1946, when he returned to headquarters at Derby as Senior Technical Assistant, with a particular interest in fuel efficiency matters. In October, 1949, Mr. Allwood was appointed Assistant (Electrical Generation & Distribution), being appointed Principal Assistant (Electrical) on September 25, 1950.

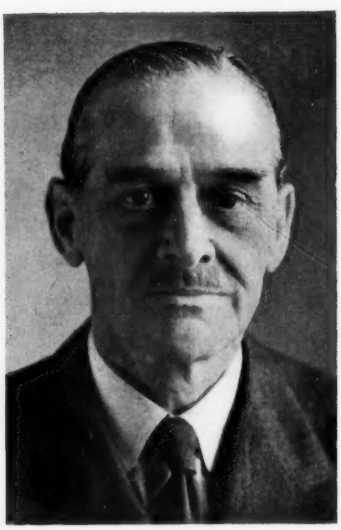
Mr. H. G. W. Gaut, New Works Assistant to the Operating Superintendent at Paddington, Western Region, British Railways, whose retirement on September 30 was recorded in our October 2 issue, has completed 50 years of service with the former Great Western Railway and Western Region of British Railways. Mr. Gaut commenced his railway career in the Divisional Superintendent's Office at Bristol in 1903, where he served

Mr. D. S. Thomson

Vice-President (Operation & Maintenance), Canadian Pacific Railway

Mr. G. N. Curley

Appointed Vice-President, Prairie Region, Canadian Pacific Railway



The late Dr. H. H. Cavendish Fuller

Chief Medical Officer to the Railway Executive, 1949-53

in various sections until early 1915, when he entered the army. On demobilisation, Mr. Gaut became a Relief Clerk in the Bristol Division and, in 1924, he took charge of the New Works Accident Section of the Divisional Superintendent's Office. In 1940 he was appointed Chief Clerk to the Divisional Superintendent, becoming Assistant two years later. Mr. Gaut's appointment as New Works Assistant to the Superintendent of the Line, which post was later redesignated New Works Assistant to the Operating Superintendent, took place in 1945. While at Paddington he has been closely associated with schemes for the rehabilitation of facilities affected by enemy action in war time, the development of proposals for revised signalling arrangements and the working of traffic, and the improvement of amenities for passengers and staff at stations throughout the Region.

Mr. D. S. Thomson, Vice-President, Prairie Region, Canadian Pacific Railway, who, as recorded in our October 2 issue, has been appointed to the newly-created post of Vice-President (Operation & Maintenance), Canadian Pacific Railway, was born at Cornwall, Ontario. He joined the Canadian Pacific Railway as a messenger at the Angus Shops in Montreal before his 14th birthday. After serving in various Montreal offices as clerk, secretary and statistician, he was appointed Superintendent of the Trenton Division, later moving to Brownville Junction, Me., in the same capacity. In 1914 he became General Superintendent, Ontario District, with headquarters at Toronto, later becoming Assistant General Manager and later General Manager of the Eastern Region. He was made Vice-President of the region in 1948, and moved to Winnipeg in 1950.

Mr. G. N. Curley, General Manager, Eastern Region, Canadian Pacific Railway, who, as recorded in our October 2 issue, has been appointed Vice-President, Prairie Region, received much of his early railway operating training in Farnham, Que., where he served in the Superintendent's office from 1918 to 1925, and again from 1928 to 1934, after three years in Montreal. He was Chief Clerk on the Laurentian Division in Montreal for three years before entering the Transportation Department as a travelling car service agent, in which capacity he first went to Toronto in 1937. In 1938, he was granted six months' leave of absence to reorganise the complex electrified railway system serving the International Nickel Company's plant at Copper Cliff, Ont., and extending to Frood Mine nearby. Mr. Curley left Farnham in 1946, when he was appointed Assistant to the Vice-President and General Manager of Eastern Lines. In 1947 he became General Superintendent of the Ontario District at Toronto. He was appointed General Manager, Eastern Region, in 1948.

Dr. H. H. Cavendish Fuller, Ch.B., Chief Medical Officer to the Railway Executive, whose death was recorded in our October 2 issue, was educated at Bishops Stortford College and at Edinburgh University, where he obtained his medical degrees, afterwards undertaking institutional work in Edinburgh and London. On the outbreak of war in 1914 he was attached to the Royal West Kent Regiment, and served in France with the rank of Captain. In 1916 he was invalided home, and later was appointed Officer-in-Charge of the Princess Marie Louise Military Hospital at Bermondsey. Returning to civilian life, he became Medical Officer of Malvern College in 1917, and later also engaged in private practice at Malvern. He was Honorary Consulting Surgeon to the Great Malvern Hospital, and Medical Referee to the Ministry of Pensions for the Malvern area. Dr. Fuller took up the appointment of Assistant Chief Medical Officer to the Great Western Railway at its Paddington headquarters in 1930, and became Chief Medical Officer in 1931. During the recent war he was at Paddington in medical charge of first aid, and was also Medical Officer, Great Western Railway Zone, to the 38th London Battalion, Home Guard, and to the Kensington Sea Cadets. In addition to his railway work he held the appointments of Medical Officer, Channel Islands Airways; Chief Clinical Assistant, National Hospital for Diseases of the Heart; and Clinical Assistant, British Red Cross Clinic for Rheumatism, Peto Place. Dr. Fuller was appointed Chief Medical Consultant to the Railway Executive in 1948, while continuing as Chief Medical Officer to the Western Region. He became Chief Medical Officer to the Railway Executive in 1949.

In an appreciation published in *The Times*, Mr. John Elliot writes:—

In the death of Dr. H. H. Cavendish Fuller, Chief Medical Officer to the Railway Executive, and formerly to the Great Western Railway, the railway service loses not only a notable professional man, but one who, by his regard for his fellow men throughout the service, made friends everywhere and was entirely without enemies. His work at the headquarters of British Railways as head of the team of medical officers in the six regions in their task of bringing the railway medical services up to the best standards of industry generally, his knowledge, his tact, his kindness, and his perfect charm of manner were all invaluable.

To those who have been closely associated with him since the creation of the Railway Executive his loss will be severely felt and his memory specially revered. His contribution to the solution of the problems which he tackled with such courage on January 1, 1948, will be of the greatest benefit to the medical officers of the service, who together will carry on his work. It is a strange and sad coincidence that his death should have occurred on the last day of the official existence of the executive which he served with such devotion.

Mr. G. E. Curtis, Executive Officer (Goods), Railway Executive, has been appointed District Goods Superintendent, Broad Street, London Midland Region.

We regret to record the death on October 2, at the age of 81, of Mr. John Samuel Nicholas, formerly Steelwork Assistant to the Chief Engineer, Great Western Railway. Mr. Nicholas retired in 1937. Mr. H. Savage, Assistant Engineer (New Works), Western Region, represented Mr. M. G. R. Smith, the Civil Engineer, at the funeral which took place at Perry Bar Crematorium, near Birmingham, on October 6.

The Japanese delegation to the Railway Sub-Committee Meeting of E.C.A.F.E., which is being held in Paris this week, consists of Mr. Junichi Ueda, Director, Railway Supervision Bureau Ministry of Transportation, and Mr. Naomasa Shioe, Superintendent of Operations, Japanese National Railways. Mr. Seizo Nakaji, Chief, Planning Section, Construction & Maintenance Bureau, and Mr. Ichiro Kato, Chief, Rolling-Stock Repair, Rolling-Stock & Machinery Bureau, are acting as Advisors to the delegation. After the Paris meeting, they will visit Switzerland, Germany and the Netherlands from October 11-20, and will be in London from October 20-23.

The following staff changes have been announced by South African Railways:—

Mr. A. D. van der Byl, System Manager, Durban, has been appointed Inspecting Engineer (Maintenance), Chief Civil Engineer's Office, Johannesburg.

Mr. R. T. Mostert, Understudy to the Chief Superintendent (Road Motor Services) Headquarters, Johannesburg, has been appointed System Manager, East London.

Mr. A. S. Manchipp, Superintendent (Staff), has been appointed a Relieving System Manager.

Mr. I. J. Mair, Inspecting Engineer (Maintenance), has been appointed Assistant Chief Civil Engineer (Research).

We regret to record the death on September 27, of Mr. R. Henderson, Traction Contracts engineer, British Insulated Callender's Construction Co. Ltd.

We regret to record the death on September 21, at the age of 57, of Mr. Percy Butler, A.M.I.E.E., Director and General Manager of Bruce Peebles & Co. Ltd.

Mr. I. Clunas has been made Manager of the Bristol office of C. A. Parsons & Co. Ltd., in succession to Mr. J. Packard, who is now Manager of the firm's London office.

Mr. George Pullen, who, for the past 19 years has been employed with Leyland Motors Limited, has now joined the staff of Transport Engineering & Equipment Limited, Lancaster.

Mr. J. L. Willoughby, O.B.E., M.Inst.T., formerly Deputy Secretary to the Road Haulage Executive, was appointed Secretary to the Board of Management of British Road Services. The inaugural meeting of the Board was held on October 1.

Mr. L. Rumley, Sales Director of Conveyancer Fork Trucks Limited, has left England on a visit to the company's Canadian associate, Electro-Hydraulics (Canada) Limited, of Toronto. During his visit he will survey the market in Canada for British materials handling equipment, and he expects to return to this country towards the end of October.

Mr. C. S. Richardson, Crosskeys Area Manager, Western Welsh Omnibus Co. Ltd., has been appointed Traffic Assistant to Jamaica Omnibus Services Ltd. Mr. P. Wood, Deputy Works Superintendent, Birmingham & Midland Motor Omnibus Co. Ltd., has been appointed Engineer Assistant to the Jamaican Company. It is anticipated that Mr. Richardson and Mr. Wood will be leaving for Jamaica towards the end of next month.

Institution of Civil Engineers

The following have become Graduates of the Institution:—

Mr. C. J. S. Branscombe, B.Sc. (Eng.), Messrs. Rendel, Palmer & Tritton.

Mr. M. Edwards, B.Sc., Richard Thomas & Baldwins Limited.

Mr. N. A. O. Swabey, B.Sc. (Eng.), Messrs. Rendel, Palmer & Tritton.

Mr. D. B. Valpy, B.Sc., East African Railways & Harbours.

Last Message of Railway Executive to British Railways Staff

Six years of progress despite difficulties: annual surpluses and increasing economies

Under the title "A message to the Staff" the October issue of *British Railways Magazine* contains a message signed by the Members of the former Railway Executive. After pointing out the October, 1953, issue is the last to be produced under the direction of the Railway Executive, though the journal will continue for the time being in its existing Regional form, and outlining the changes in organisation under the Transport Act, 1953, the message continues:—

"The six years during which the Railway Executive, with its six Chief Regional Officers, has managed British Railways on behalf of the Commission have formed a notable period of change and development, of problems and progress. Despite the legacy of war-time shortages and arrears, and at times crippling limitations in the supply of coal and steel, British Railways, during the period have continuously improved their technical efficiency and their standard of service to the public, while in no single year have their receipts failed to exceed their expenditure. Moreover, the management and working of British Railways as a unified system has yielded progressively increasing economies to help offset the ever-rising costs.

"Now B.R. faces change again, but that should not dismay anyone belonging to an industry that has been changing, evolving and developing for over a century. In fact, it should give all the opportunity to pause, review the record and do even better. It has been said, 'Once a railwayman, always a railwayman.' That is still true. In thanking you all, officers and staff alike, for your loyalty and hard work, and wishing you every success and happiness in the future, we do so knowing that your first duty will continue to be, as it has been in the past, to the public whom you serve.

"From October 1 the newly-constituted British Transport Commission absorbs the Executive and with its six Railway Regions carries on. There will be great opportunities to learn from the experience of the last six years—from our successes and mistakes alike. Finally, let us all give a warm welcome and our whole support to the new Chairman, General Sir Brian Robertson, who comes to British Transport with a record of distinguished service second to none both as a soldier and an administrator in many parts of the Commonwealth.

"British Railways are the oldest and the busiest railways in the world. Let us all strive to make and keep them what many of us already believe them to be—the finest and safest."

Coal Washing Plant in Victoria

The scarcity of New South Wales Maitland Coal, which has persisted since 1940, has forced the Victorian Railways to use many inferior and expensive coals as locomotive fuel, including Lithgow and Newcastle borehole coal from New South Wales and coal imported from India and South Africa. The Lithgow and borehole coals have a high ash content of 20 per cent and more and the grading ranges from large lumps to very fine coal. As coal quality deteriorated, train running became less reliable owing to delays from poor steaming and frequent fire cleaning. About a year ago successful trials were made with a Lithgow coal that had been washed and graded at the New South Wales Mining Company plant, at Lithgow, New South Wales. The company gets its coal from open-cut mines.

Method of Washing

The coal is first crushed and the fines, material below $\frac{3}{16}$ in., are extracted; by screening it then goes through a bath of heavy liquid, in which the coal floats and any stone drops to the bottom. The object of the process is to remove all the free stone, and by so doing, the ash content of the coal is lowered from about 20 to 14 per cent. The coal is then graded into cobbles and smalls; the cobbles, 4 in. to $1\frac{1}{4}$ in. size, are reserved for locomotive use, the smalls $1\frac{1}{4}$ in. to $\frac{3}{16}$ in. are used at power stations.

An important characteristic of this coal is its uniform quality and grading; it is hard and capable of withstanding handling without breakage, and is, therefore, loaded on the engine in much the same condition as it was when it left the washery. The New South Wales Mining Company washing plant is capable, at the moment, of treating about 10,000 tons of coal a week. At present, all the coal brought by the Victorian Railways, except Wonthaggi Victorian coal, is washed Lithgow coal.

Signatures of the Chairman and Members of the Railway Executive appended to their final message to British Railways staff

Transport Ministers' Conference

Earlier this year, a European inland transport conference was held under the aegis of the Organisation for European Economic Co-operation (O.E.E.C.) to study the existing organisation and regulation of international inland transport in Europe and see whether they are adequate to make the best use of the existing transport system and for its rational development. All the members of O.E.E.C. were represented except the Irish Republic and Iceland; Spain and Jugoslavia participated and the U.S.A. sent observers. After discussing the report for this conference the Council of O.E.E.C. recommended that a European Conference of Ministers of Transport should be established and that the member countries which had been represented at the inland transport conference should participate in the Constituent Conference. At the invitation of M. Segers, the Belgian Minister of Communications, this Constituent Conference will be held in Brussels on October 12-17.

Mr. Alan Lennox-Boyd, Minister of Transport & Civil Aviation, has accepted the invitation to attend this Conference in Brussels and will lead the United Kingdom delegation for the first part of the conference; the Earl of Selkirk will lead for the second part. As advisers the Minister will be assisted by Sir Cyril Birtchnell and officials from the Ministry of Transport & Civil Aviation and from the Foreign Office.

Kowloon-Canton Railway

(*Concluded from page* 410)

Advantage was taken of new designs and materials when indenting; one interesting feature in the new goods wagons is the Iracier type of axlebox. It was seen in use in Mauritius on sugar cane wagons of small capacity but the railway manager stafed that they were most efficient and economical in oil. This proved to be the case on the 40-ton wagons used on the Kowloon-Canton. The cast steel wagon bogies with transverse as well as coil springing have also proved to be excellent in use.

Through Traffic with Canton

Through running with Canton commenced on November 14, 1945, and passenger traffic was intense. Passenger through running closed down on October 15, 1949, and has not resumed, but goods traffic such as it is, due to the embargo, is conveyed in through wagons, and down traffic to the Colony exceeds the up by about two thirds.

Total net earnings from the date of recommencement to March 31, 1953, amounted to $21,379,404·46 and had sufficient coaches been available within two or three years of re-occupation, the increased earnings would have paid for them. Local passengers have increased progressively over recent years due to a desire to live out of town and the great popularity of picnics and the coaches are therefore still needed.

New Roller Bearing Factory

Opening of Ransome & Marles new works at Annfield Plain

To meet the new increased demand for roller-bearings both in this country and overseas, the Ransome & Marles Bearing Co. Ltd., on October 2 opened a new factory at Annfield Plain, Co. Durham. The works cover some 3½ acres. In the layout special attention has been paid to ease in handling, from the receipt of its raw material to the finished product. A particular feature of the design is its straight line flow and continuous movement, which should contribute considerably to a high man-hour efficiency.

Works Layout

The equipment comprises the most modern types of general and special purpose equipment for machining the ball races from tube, in which form the raw material is received. Attention also has been paid to the layout of the heat treatment side of production, the furnaces being gas heated and atmosphere controlled, and designed to produce hardened parts free from scale.

Besides the normal inspection and viewing rooms provision has been made for inspectors and viewers to make progressive operational checks near the production line. To ensure that all inspection gauges and equipment are maintained to the standard of measurement required for precision work a standards room will be kept at constant temperature; all reference gauges will also be subject to periodic check by National Physical Laboratory. The works laboratory is fully equipped to carry out all necessary checks of raw materials and to control heat treatment processes.

Particular attention has also been given to heating and ventilation to ensure comfort, and in the finishing department, ventilation air is filtered to eliminate dust which may find its way into the finished product. The works design is such that multiple expansion can be carried out if necessary.

First-aid stations and cloakrooms are centrally sited, and self-contained tea stations and a commodious canteen are provided. The new works is expected to be in full production by the middle of 1954.

Opening Ceremony

Mr. E. W. Senior, Chairman of the Ransome & Marles Bearing Co. Ltd., introducing Mr. A. R. W. Low, Parliamentary Secretary to the Ministry of Supply at the opening ceremony on October 2, gave a brief outline of the continued expansion of the company since the inception of the parent company at Newark-on-Trent in 1906.

The two world wars saw considerable increase in mechanical transport, he said, and a decided advance in the design of machine tools, aircraft and the automobile and other sections of the engineering industry. There was also an increasing demand for ball and roller bearings overseas. Ultimately further expansion at Newark could not be carried out because of lack of space and although two subsidiary factories were opened at Nottingham and Grantham the increasing demand for the company's products could not be met.

The decision was taken in 1950 to establish an entirely new works, on a site where ample space for expansion was available, and where statistics showed the possibility of securing personnel in requisite numbers, and it was for these reasons that Annfield Plain was chosen.

Requesting Mr. Low to open the new factory, Mr. Senior paid tribute to the technical staff of the company for providing a most modern layout which would contribute much to increased productivity both for the home and overseas markets.

Mr. Low in declaring the factory open, said that the new scheme united the interests of the Government and of industry. He congratulated the firm on building its factory in a development area. The ball and roller bearing industry, he added, was responsible for a large proportion of the country's export trade. The shortage of materials had largely disappeared, and when the new factory was in full production, it would contribute considerably to the drive for increased output.

Mr. C. G. H. Richardson, Managing Director of the company, welcoming the guests, stressed the need for increased productivity and expressed gratitude to Mr. Low and for the help given by the Ministry of Supply.

Crewe Locomotive Works Training School

The new British Railways Works Training School at Crewe, of which the foundation stone was laid by Mr. R. A. Riddles on September 22, as recorded in our issue of September 25, adjoins the locomotive works. It will be the biggest of its kind on British Railways, supplying the locomotive and other technical departments with upwards of 270 apprentices a year.

The new building will comprise a large workshop consisting of eight main sections, each under an instructor, around which will be accommodation for the chief instructor, lecturers, and main administrative facilities. Provision is made for three general classrooms, a science room, a drawing office, and a library. A separate assembly hall is being provided adjacent to the main building, to serve the combined purpose of a gymnasium and cinema.

The training scheme will give preliminary practical and theoretical instruction to all apprentices upon engagement at the age of 15 for a whole year, two-thirds of the time being devoted to practical study and the rest to theory. The school will make provision for training 210 locomotive works trade apprentices a year and, in addition, upwards of 90 from other technical departments, these including the Civil Engineer's, Motive Power, and Signal & Telecommunications departments, thus bringing up the total annual quota of trainees to 300. Intakes will conform to the leaving dates of the schools in the Crewe area and there will be three a year. Accordingly, one-third of the total annual requirements of the works will be started each school term.

General and Specialist Training

After four months in the training school, the apprentice trainee will be adjudged to what particular trade he is most suited, by the chief instructor, and for the remaining eight months he will be attached to the section which includes that particular trade, and to which he will become apprenticed on leaving the school. Arrangements will be made for first and second term trainees to spend one hour each week in physical training and third term trainees will receive a topical talk given by a selected member of the Railway Executive staff or see an educational film in the assembly hall.

The training given to the trainees at the new school will be based on the progressive system, whereby he will be given the best training the school and workshop can offer and of a nature that does not call for skilled labour. The system applies

Inspection of Lancaster-Morecambe-Heysham Electrification

Mr. John Elliot addressing the guests. On his left is Mr. C. M. Cock, and the extreme left Mr. W. H. McFadzean *(See article in our last week's issue)*

to trade apprentices who become skilled craftsmen at the age of 21.

The principal aims of the new school are twofold; the trainee will be given a first class training in a skilled trade and, during that training, be given encouragement to develop into a useful member of the community.

Mr. John Elliot's Message to London Transport Staff

Mr. John Elliot, formerly Chairman of the Railway Executive, who became Chairman of London Transport Executive on October 1, in succession to Lord Latham, has sent the following message to the staff of London Transport: "On taking up my appointment as Chairman of London Transport I would like to say to all who serve in it how proud I am to join such a famous service, with long and fine traditions.

"When I was a young Southern Railway traffic officer I had the good fortune to come into contact with the late Lord Ashfield and Mr. Frank Pick and learned from them the meaning of service to the public.

"I realise how hard it will be to follow them, and Lord Latham, but I will do my best. I look forward to working with you all, and I hope to meet as many of you as possible before the year is out."

Electronic Resistance Heater at Earlestown Works, L.M.R.

A 200-kVa three-phase, three-head bar heating machine for heating up to 950° C. mild steel bars 1½ in. dia. and approximately 1 ft. 2 in. long, installed at Earlstown Wagon Works, London Midland Region, is the only one known of its kind. Its advantages are: (*a*) a rapid and thorough soaking of the steel is created; (*b*) heating originates from the centre of the bar, gradually working to the outer diameter; (*c*) the amount of scale is also reduced to a minimum; and (*d*) each half-link receives the same pre-bending heat treatment within very close limits.

The machine consists of three separate units, each unit working independently and consisting of a single-phase water-cooled transformer, pneumatically operated water-cooled contact jaws, and associated electrical equipment.

Heating Procedure

The bars to be heated are placed in the contact jaws of one of the heater units. The depression of a foot-operated air valve causes the contact jaws to close and, when full clamping pressure is developed, the heating current to be switched on. The time-lag between clamping and applying the heating current obviates possible burning of the contact jaws and the bar ends due to localised resistance heating.

The heating current is switched off when the bar has reached a pre-set temperature, the switch being controlled by a Radiovisor pyrometer. The clamps are released by the depression of a second pedal on the foot operated air valve.

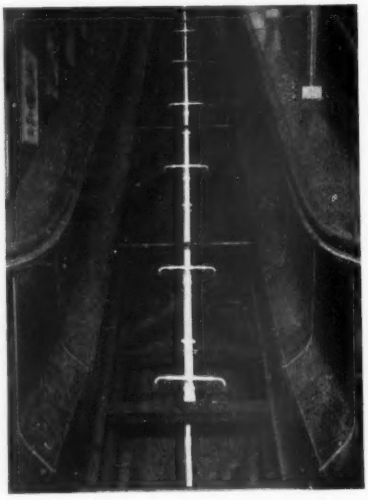
The heating time for each bar varies from 30 to 50 sec. and the machine has been found to be capable of an output of 7,000 heated bars a week.

Provision is made on each pair of clamping heads to accommodate the expansion of bars during heating. A water control switch in series with the Radiovisor control unit and the pneumatic switch protects the machine against failure of the cooling water supply, a pressure of 10 lb. per sq. in. being required to operate the water control valve.

The current for the machine is taken from a 440 volt, 3-phase, 50 cycles supply and the air supply for the pneumatically operated contact jaws is from a 100 lb. per sq. in. compressed air line.

Waterfog Equipment on Escalators

To reduce the fire risk in dirt and fluff which collects underneath London Transport escalators, many have now been fitted with waterfog equipment; this consists of a series of pressure nozzles arranged in pairs at regular intervals below the moving stair treads. These nozzles are fed from the main water supply at a minimum pressure of 50 lb. per sq. in. and, when turned on, emit a very fine waterfog which reaches every part of the machine beneath the treads. The control valve is placed near the entrance to the escalator machine chamber, with instructions to the staff as to its use. Should smouldering occur, the valve can be turned on by any available member of the operating or engineering staff; during this operation the escalator is kept in motion, but passengers are not allowed on it.



Waterfog system on escalators

Removal of Dirt

Waterfog is also used for the routine removal of dirt and fluff; the speed with which these accumulations build up varies as between escalators. Where it occurs most rapidly, an application of waterfog is given at three-weekly intervals; on other machines the period is lengthened to six, nine or twelve weeks according to local conditions. In view of possible interference with the lubrication of the main step chains and wheels, the regular application of waterfog is limited to half a minute's duration, but experience has shown this to be sufficient to remove most of the loose dirt and fluff without seriously affecting lubrication. It is, however, sometimes necessary within a very short time to give a special application of lubricant to some of the wheels and individual links in the chains. All machines are fitted with mechanical lubricators, which apply oil externally to the chains and wheels by means of small-bore copper pipes leading to suitable lubrication points; the use of waterfog has necessitated adopting a supplementary method of applying oil to the internal wearing parts of the chains. This is by means of portable pressure gun equipment; as the chains are not fitted with greasing nipples, the pressure guns have nozzles specially designed to inject oil through the lubricating holes in the chain rollers so as to penetrate effectively to the internal wearing surfaces of the bushes, pins and side-plates of the chains. This operation does not need to be carried out very frequently. The introduction of waterfog equipment assists in maintaining the escalators in satisfactory condition, and also considerably lengthens the intervals at which their complete cleaning need be carried out.

Increasing Use of Gedser-Grossenbrode Ferry Route

In the three months June, July and August about 185,000 passengers and more than 19,000 motorcars were carried by the new ferry between Gedser, in Denmark, and Grossenbrode in Germany. As still more are expected next summer, it has been decided to increase the services from three to seven round trips daily.

The services are maintained by the German ferry *Deutschland* and the Danish ferry *Danmark*. Another Danish ferry is being built, but will not be ready until next autumn. The Danish ferry *Dronning Ingrid* will therefore be transferred next Spring to the route from the Great Belt crossing, after alterations have been carried out.

The German Federal Railway and Danish State Railways will propose jointly to the International Timetable Conference in October that when the increased service is introduced next May some international trains shall be routed by way of Grossenbrode-Gedser instead of the Great Belt, and their timing much improved. At present only the "Scandinavia - Italy Express" runs *via* Grossenbrode-Gedser, and it will continue to do so, but, it is expected, on an improved timing. The "Basle Express" is a summer relief to the "Scandinavia-Italy Express," conveying through coaches between Nyborg and Basle. It is intended that between Gedser and Grossenbrode it shall share the same ferry as the "Scandinavia-Italy Express," so as to reach Basle at about the same time as that train. Other trains which it is proposed to divert or extend to this route are the "Scandinavia-Holland Express," "Nord-West Express," "Hamburg Express," and "Alpen Express." The "Hamburg Express," would leave Copenhagen about 10 p.m. instead of 7.30 p.m. and give a connection with the "Adria Express" to Jugoslavia and Italy. The "Alpen Express," which now runs between Hamburg, Munich, the Tyrol, and Italy, starts from Copenhagen and reaches Hamburg *via* Gedser-Grossenbrode and will carry through coaches between Copenhagen and Rome and Venice.

IMPERIAL CHEMICAL INDUSTRIES LIMITED: INCREASED DIVIDENDS.—The interim dividend on the £70,651,162 ordinary capital of Imperial Chemical Industries Limited is announced at 6 per cent. This is a one per cent increase on the previous year's figure. Final payment for 1952 was eight per cent, making a total for the year of 13 per cent.

General Purpose Ship for Clyde Services

The £1,000,000 scheme of British Railways for modernisation of their Clyde estuary fleet entered its second phase on September 22 at the yard of William Denny & Bros. Ltd., Dumbarton, when the first of three general-purpose ships was launched and named *Arran* by Mrs. Harrington, wife of Mr. J. L. Harrington, Chief Officer (Marine & Administration), British Transport Commission.

The three vessels are specially designed for the conveyance of passengers, cargo, road vehicles, and livestock, and will be operated on ferry services to Dunoon, Rothesay, and Millport and Arran.

The principal features are:—

Length, overall	185 ft. 6 in.
Length between perpendiculars ...	180 ft.
Breadth, moulded	35 ft.
Draught, loaded	7 ft. 6 in.
Tonnage, gross	650
Operating speed	15 knots

They will be equipped with lounges, tearooms, refreshment bars, and other amenities. The passenger complement will be 450, and the main deck will provide covered accommodation for cargo and motor cars.

Lift for Landing Road Vehicles

An electrically operated lift 33 ft. broad × 20 ft. long will raise or lower road vehicles between pier and main deck levels at all stages of the tide, whilst turntables on the lift platform and at the forward end of the car deck will facilitate stowage. The lift will also be capable of taking a bus 30 ft. long × 8 ft. broad × 9 ft. 6 in. high.

The *Arran* is twin screwed, the main propelling machinery consisting of two British Polar Atlas diesel engines.

Mr. E. L. Denny, Chairman of William Denny & Bros. Ltd., speaking after the launch, briefly sketched his firm's close association with various railway managements over a long period of years culminating in the vessel launched today. He was convinced the *Arran* would meet all demands facing her in the Clyde Estuary, adding that the new ship clearly indicated that Mr. T. F. Cameron, Chief Regional Manager, Scottish Region, and his staff obviously had the question of Clyde steamer services very much before them. After considering with great care the many problems involved, they had worked out an excellent programme of new construction suitable for the services to be operated.

Novel Features

Mr. J. L. Harrington, replying for the Railway Executive, said that while this new vessel was only one unit in a programme for the Clyde, it was something more than just another ship. She was a novel ship and the embodiment of much ingenuity to cater not only for passengers and ordinary cargo, but also for motor vehicles and freight containers. All the vessels in the new programme were a break with tradition.

When the *Arran* is brought into service in a few months' time, he added, she will give good service to the communities of the Clyde Estuary and particularly to the island whose name she was proud to bear.

Referring to the burden of new construction Mr. Harrington indicated that the cost of the new ship was as much as the combined price of five ships of the present Clyde fleet which were built between the two world wars. They were the *Duchess of Hamilton, Duchess of Montrose, Marchioness of Graham, Marchioness of Lorne* and the *Caledonia.* In view of these and other comparative costs it was a great struggle to achieve anything near a balance between revenue and expenditure, when 60 per cent of all the passenger traffic on the Clyde had to be carried in the three summer months.

Mr. T. F. Cameron, referring to the special design of the four new passenger and three dual purpose ships, said they would make a valuable contribution to the maintenance of the essential ferry services between Clyde piers and the mainland.

Staff & Labour Matters

Bus Workers' Wage Claim

The National Council for the Omnibus Industry on September 29 resumed consideration of the trades union claims for a substantial increase in wages and alteration and improvements in working conditions. At the meeting the employers made their considered reply in which they intimated that they were unable to accede to the claims.

In accordance with the procedure laid down by the constitution of the council the difference which exists between the two sides is being referred to a conciliation committee. The claims affect some 100,000 workpeople in the provincial bus industry employed by the private bus companies and undertakings controlled by the B.T.C.

Railway Wage Claim

The claim by the three railway unions for an increase of 15 per cent in wages will be heard by the Railway Staff National Tribunal on November 9. It has been referred to the Tribunal for arbitration after rejection by the Railway Executive at the two preceding stages in the negotiating machinery.

Engineers' Pay Demand

The reply of the Engineering & Allied Employers' National Federation to the 15 per cent wage claim lodged last July by the C.S.E.U. was expected as we went to press.

Contracts & Tenders

The Vulcan Foundry Limited has received an order for 46 2-8-4 locomotives, class "31" for the East African Railways, to be built to the supervision and inspection of the Crown Agents for the Colonies. The total value of the order is some £1,500,000.

The orders placed by British Railways with the Fairfield Shipbuilding & Engineering Co., Ltd., for one 25-ton and three 21-ton flat trolley wagons, and reported in our June 26 issue, have been increased to two and four respectively.

Orenstein-Koppel & Lübecker Maschinenbau A.G., Dortmund, is proceeding with an order for 200 multiple tipping wagons for the German Federal Railways. Each of the four tips has a capacity of 155 cu. ft.

Orenstein-Koppel & Lübecker Maschinenbau A.G., Dortmund, has received an order from the Rheinische Braunkohle A.G. for a series of side-tipping wagons of 102 cu. yd. capacity. Each wagon is carried on four two-axle bogies.

The Swiss Locomotive & Machine Works has received an order from the Swiss Federal Railways for the mechanical portions for two 1,600 h.p. electric rack-and-adhesion locomotives for the metre-gauge Brunig line. Electrical equipment is to be divided among several Swiss companies, S.B.B. acting itself as main contractor.

Schindler Waggons S.A., of Pratteln, has received an order for 14 control trailers, with third class seating accommodation, from the Swiss Federal Railways. They are to be used in conjunction with motor-coaches and intermediate ordinary coaches to form push-and-pull trains.

British Railways, Eastern Region, have placed the undermentioned contracts:—

W. J. Cearns Limited, London, E.15: construction of new canteen, kitchen, etc., at Bishopsgate Goods Depot

Boulton & Paul Limited, Norwich: supply and erection of lineside fencing in the Ipswich District

British Railways, London Midland Region, have placed the following contracts:—

Roffe Limited, London, N.2: external redecoration of Euston House

Sprosson & Babb, Limited, London, N.19: new drying, locker and mess rooms for capstanmen at Camden Goods Depot

The Butterley Co. Ltd., Butterley, near Derby: reconstruction of the superstructure and alterations of abutments of bridges Nos. 1/18 and 1/25 over Hawley Road and Hartland Road respectively, on the Hampstead Junction line

The Belgian National Railways have placed an order for 55 diesel-electric locomotives of Bo-Bo wheel arrangement, 84 tons weight and 1,600 h.p. (traction input) with the S.A. John Cockerill, of Seraing, Liége, at a price of 568,000,000 Belgian fr.; and a second order for 40 locomotives of Co-Co wheel arrangement, 108 tons weight, and 1,600 h.p. (traction) with the Société Anglo-Franco-Belge des Ateliers de la Croyère, Seneffe et Godarville, at a cost of 436,000,000 Belgian fr. Delivery of both is to begin within one year, but the first payment is not to be made for several years. The majority of these locomotives are to be fitted with train-heating equipment, and the remainder are to have space for later installation.

The Special Register Information Service, Export Services Branch, Board of Trade, reports that the United Kingdom Trade Commissioner at Karachi has notified a call for tenders, issued by the Department of Supply & Development, Government of Pakistan, for the supply of:—

10,000 ft. of 41¼ lb. light rail track, 2 ft. gauge, consisting of 30 lb. flat-bottom type medium manganese quality rails, complete with steel sleepers, bolt, nuts and fishplates

The stores are required immediately. The tenderer should, however, indicate the earliest possible date by which he can guarantee supply. Quotations should be for delivery C.I.F. Chittagong in the case of imported stores. The quotation should be in Pakistan currency only, converted at Sh.2-1.27/32—Re 1, otherwise the tender will be liable to be ignored.

Tenders must be submitted so as to reach the office of the Assistant Director of Supplies, Metals & Hardware Directorate, Department of Supply & Development, Karachi, by 8 a.m. on October 19.

A copy of the tender document may be inspected by United Kingdom firms in Room 801, Lacon House, Theobalds Road, W.C.1.

The Special Register Information Service, Export Services Branch, Board of Trade, reports that the British Embassy at Madrid has notified an announcement published in the Spanish Official Gazette (*Boletin Oficial*) regarding a call for tenders issued by the Ministry of Public Works for the supply of the following equipment and materials for narrow-gauge railways, including those State-operated:—

	Approx. value, pesetas
(A) *Diesel motor coaches*	
250–300 h.p. diesel motor coaches for passenger traffic	120,000,000
Diesel locomotives	
400–500 h.p. and 800–1,000 h.p. diesel locomotives..	350,000,000
Engines and essential spares	30,000,000
Electric traction	
Electric motor coaches ..	30,000,000
Motor coaches for goods traffic	12,500,000
Rolling stock	
Passenger coaches or trailers, two-axle wagons, platform wagons, high-side platform wagons, and closed wagons, 25 per cent of them fitted with a screw brake	90,000,000
Renewal and reinforcement of Track	
Rails and small track fittings (fishplates, base plates, screws and bolts)	40,000,000
Sleepers	6,000,000
(B) Various works and purchases	221,500,000

The closing date for receipt of tenders is noon on October 15. Tenders should be addressed to the Department of Railway Exploitation & Traffic, General Directorate of Railways, Tramways & Road Transport, Madrid. One copy of a translation of the Gazette announcement is available for inspection by United Kingdom firms in Room 801 at Lacon House, Theobalds Road, London, W.C.1. Two additional copies are available for loan in order of receipt of application.

Notes and News

Vacancy for Civil Engineer.—An experienced civil engineer is required as head of party on railway location surveys in West Africa. See Official Notices on page 419.

Vacancies for Service Engineers.—Applications are invited for the posts of service engineers required by a firm of diesel engine manufacturers. See Official Notices on page 419.

Draughtsman Required.—A draughtsman, with experience in the design of steam, diesel or electric locomotives, is required by a firm in South East London. See Official Notices on page 419.

Locomotive Erecting Shops Planner Required.—Applications are invited for the post of locomotive erecting shop planner required by a firm engaged on the production of industrial and main line steam and diesel-electric locomotives. See Official Notices on page 419.

Entire Factory Removal by British Railways.—British Railways, Southern Region, have removed the entire factory of W. Edwards & Co. (London) Ltd., from Worsley Bridge Road, Lower Sydenham, to the new factory estate, Manor Royal, Crawley. Edwards & Co. Ltd., manufactures high vacuum equipment for research and industrial purposes, and the move, estimated at 800 tons, included machinery, instruments, stores, equipment, research laboratory, office furniture and canteen; the move was spread over three weeks. British Railways carried out the removal by their direct road transport service with a fleet of articulated tractors and trailers and a 3-ton mobile crane for handling heavy machinery.

E.C.A.F.E. Railway Sub-Committee.—A meeting has been held in Paris this week of the Railway Sub-Committee of the Economic Commission for Asia and the Far East.

Institute of Transport Anniversary Luncheon.—The Anniversary Luncheon of the Institute of Transport will be held at the Connaught Rooms, Great Queen Street, London, W.C.2, at 12.30 for 1 p.m., on Tuesday, November 3. The speakers will be Mr. Alan Lennox-Boyd, Minister of Transport, and Lord Balfour of Inchrye.

Road Haulage Association: Annual Conference.—The Annual Conference of the Road Haulage Association will be held at Eastbourne from Wednesday, October 14, to Friday, October 16. The principal guest at the Banquet to be held at the Grand Hotel, on Thursday, October 15, at 6.30 for 7 p.m. will be Mr. Bernard Braine, M.P.

Railway Reservists in Camp.—Annual training at the Transportation Centre, Royal Engineers, Longmoor, recently was carried out in two fortnightly periods by 18 Railway Group, R.E., A.E.R. During the first period, 151 and 607 Railway Maintenance Squadrons were in camp with 158 Railway Survey Squadron. Besides military training, the technical work included a survey for a depot, bridging, and tracklaying. During the later period, when 152 Railway Traffic Squadron, 154 Locomotive Running, Squadron, and 1 Railway Telegraph Squadron of the Royal Signals were in camp, Longmoor Public Day was held on September 5, and details from 18 Group assisted in the various demonstrations. Next day (Sunday), church parade was held, the salute being taken by Brigadier C. E. A. Browning, Commander of the School of Military Engineering. While in camp the Group was visited by the Director of Military Training, Lt.-General R. C. Cottrell-Hill. Many of the reservists whose time had expired have signed on again for a further period after attending the camp. This was 18 Group's first camp under the new Commandant at Longmoor, Brig. C. H. Barnett, M.Inst.T. The Group Commander is Colonel Eric Woodbridge.

Electrification to Southend *via* Shenfield.—Reference was made in the penultimate line of the editorial note on page 366 of last week's issue to Scotland, through a printer's error. This should have read Southend.

Reservation Tickets for Christmas Travel to Ireland.—Although British Railways will be operating extra sailings to Ireland for Christmas, passengers travelling *via* Fishguard, Heysham, and Holyhead will need a steamer reservation ticket on certain days before Christmas Day.

Barsi Light Railway: Decreased Earnings.—Gross earnings for the year ended March 31, 1953, of the Barsi Light Railway were Rs. 4,865,340, showing a decrease compared with the previous year's figure, of Rs. 467,890. Net earnings were Rs. 1,062,965 as against Rs. 1,225,903 and net profits after tax were returned in sterling at £18,001, against £24,919. The total ordinary dividend is 4 per cent, the same as for the previous year.

The Superheater Co. Ltd.: Maintained Dividend.—A final dividend of 25 per cent is announced by the Superheater Co. Ltd., on the present ordinary, as increased to a combined total of £308,700 by the scrip issue of 176,400 "A" ordinary at the rate of one for six in March. In announcing an interim dividend for the year 1953 of 6d. per 5s. share on the increased ordinary and "A" ordinary capital, the board states that the trading and orders in hand for the first eight months of the year have been well maintained.

Cheaper Mid-week Fares in North Eastern Region.—Mid-week period return fares at reduced prices are being issued experimentally by British Railways, North Eastern Region, from October 1 to December 17, 1953. Outward travellers

Photo [*Eric Woodbridge*

Brigadier C. E. A. Browning taking the salute at church parade at the Transportation Centre, R.E., Longmoor, on September 6

OFFICIAL NOTICES

The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive, or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

THE PERUVIAN CORPORATION have the following vacancies on the railways in Peru:—Central Railway. TRAFFIC LEARNER. Single. Between 21 and 25 years of age. Good general education, with transportation experience either practical or theoretical. ASSISTANT ENGINEER (CIVIL) for Railway Drawing Office duties including Bridge and General Structural Steel Work Design, also Reinforced Concrete Structures. Must have sound technical training, preferably with previous railway experience. Age 30/35. A knowledge of the Spanish Language is preferable in both these appointments or willingness to learn within 6 months. Apply: SECRETARY, 144, Leadenhall Street, London, E.C.3.

N.E.R. HISTORY.—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10s. 6d.—*The Railway Gazette*, 33 Tothill Street, London, S.W.1

EXPERIENCED CIVIL ENGINEER required as Head of Party on Railway Location Surveys in West Africa. Normal age 35-45, but consideration will be given to others if specially qualified, healthy, active and accustomed to bush life in tropics. Tour approximately 18 months followed by 4½ months (or pro rata) full pay leave, with prospect of further engagement and possibility of employment on construction. Salary by arrangement; advertiser is willing to pay well for the right man. Applications to be by letter marked "Railways" mentioning the name of this paper and giving full particulars of age, qualifications and experience to RENDEL, PALMER & TRITTON, Consulting Engineers, 125, Victoria Street, Westminster, S.W.1.

RAILWAY MECHANICAL ENGINEER required by manufacturers of specialised equipment used in all types of motive power and rolling-stock. Training of approximately two years' duration would be given with a view to employment as sales engineer. Preference given to university graduate, under 30 years of age, who has served apprenticeship with a railway. Salary during training approximately £550, depending on qualifications.—Box 940, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

BOUND VOLUMES.—We can arrange for readers' copies to be bound in full cloth at a charge of 25s. per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

SERVICE ENGINEERS. Vacancies exist with diesel engine manufacturers for men with experience of both installation and service work. Applicants preferably capable undertaking installation and service duties, Industrial, Marine and Rail Traction Fields. Apply stating age, experience and salary expected to Personnel Manager, Box 971, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

DRAUGHTSMEN with experience in the design of steam, diesel or electric locomotives. Applications from retired draughtsmen with the required experience will be considered. Apply in writing to The Clayton Equipment Co. Ltd., 138 Borough High Street, London, S.E.1.

LOCOMOTIVE ERECTING SHOP PLANNER required by company engaged on production of Industrial and Main Line Steam and Diesel-Electric Locomotives. Staff appointment with pension scheme. Apply in writing for application form to General Manager, THE YORKSHIRE ENGINE COMPANY LIMITED, Meadow Hall Works, Sheffield.

JUST PUBLISHED.—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies. 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10s. 6d.—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

may go by any train on a Tuesday, Wednesday, or Thursday and return also on a Tuesday, Wednesday, or Thursday within 15 days of booking. The experiment is being carefully watched and its continuance after the Christmas holidays will depend on its popularity.

Railway Students' Association: Presidential Address.—Mr. David Blee wil ldeliver his Presidential Address before the Railway Students' Association at the London School of Economics and Political Science, Houghton Street, W.C.2, on Wednesday, October 28, at 6.30 p.m.

British Railways, L.M.R. (London) Dramatic Society.—On Thursday, Friday and Saturday, November 5, 6 and 7, the British Railways, L.M.R. (London) Dramatic Society, will present "Playbill" by Terence Rattigan, at the Fortune Theatre, Drury Lane, at 7.30 p.m. The cast will include many of the well-known members of this Dramatic Society.

Harrow Accident Memorial.—During the evening service at Christchurch, Watford, next Sunday, the Vicar will dedicate the Parish Memorial to those who lost their lives in the accident at Harrow and Wealdstone on October 8, 1952. Mr. J. W. Watkins, Chief Regional Manager, London Midland Region, will read the lesson. Many railwaymen are actively associated with this church.

Heavy Iron and Steel Carryings by British Railways.—Iron and steel carryings by British Railways for the week ended September 26, 227,671 tons, are the highest since June. During the same week over 334,000 tons of iron ore was conveyed from the principal steel works. Coal carryings for the week ended 6 a.m. October 5, totalled 3,240,470 tons, including 373,490 tons conveyed during the weekend.

Special Trains for N.A.T.O. Fleet.—The British Railways paddle steamer *Jeanie Deans* took sightseers on cruises round the N.A.T.O. fleet from Clyde Coast piers on Saturday and Sunday, October 3 and 4. On Saturday afternoon the steamer left Kirn, Dunoon and Gourock with a train connection from Glasgow Central, and in the evening gave a cruise from Gourock and Craigendoran with train connections from Glasgow Central to Gourock and from Queen Street to Craigendoran. Whilst the ships were at the Tail o' the Bank, British Railways ran twenty special trains from Princes Pier, Greenock and Gourock to Glasgow to bring the naval personnel on day leave from the fleet to the city, with a corresponding return service in the evening.

Krupp Eisenhandel G.m.b.H.: Resumption of Business.—Krupps Eisenhandel G.m.b.H., of Düsseldorf, resumed active business as from October 1, and has taken all the business, staff, and offices of Westeisen, Westdeutsche Eisenhandelsgesellschaft m.b.H., Düsseldorf, which has carried on the export business since January, 1948. Krupp Eisenhandel will communicate with such customers and suppliers of Westeisen, with whom they have long-term contracts, with a view to transferring such contracts upon mutual agreement.

The Platinum Metals Exhibition.—The Institution of Metallurgists announce that H.R.H. The Duke of Edinburgh will open their Platinum Metals Exhibition at Grosvenor House, Park Lane, London, W.1, on Monday, October 19. The exhibition is being held to mark the triple jubilee of the discovery by the British Scientist, William Hyde Wollaston, of the metal palladium. The exhibition, which will be open to the public from Thursday, October 22, to Saturday, October 24, will show the vital part played by the platinum metals in science and industry today.

London Transport Locomotive Named "Sherlock Holmes".—The London Transport Metropolitan Line electric locomotives are being named again, after famous historical persons connected with former Metropolitan Railway territory. Mr. S. C. Roberts, President of the Sherlock Holmes Society, performed the ceremony of naming No. 8 *Sherlock Holmes* at Baker Street Station on October 5. He was thanked by Mr. A. B. Valentine, Member, London Transport Executive, for the presentation of the nameplates by the Society. Sixteen of the original 20 of this class of electric locomotives remain in service. They haul Aylesbury line trains of compartment stock between the City, Baker Street, and Rickmansworth, where steam locomotives take over. Until 1942-43 each bore a bronze nameplate. At that time it was expected that after the war the line would be electrified beyond Rickmansworth and that the locomotives would be withdrawn, and the nameplates were removed for salvage. Since then, electrification has been deferred, and the locomotives are now being reconstructed to fit them for further service.

Connel Ferry Bridge: Temporary Closing of Roadway.—To facilitate repairs to the roadway over Connel Ferry Bridge, Argyll, British Railways, Scottish Region, have closed the roadway to all traffic between 10 p.m. and 6 a.m. daily including Sundays, from October 5-18 inclusive. The bridge carries the Ballachulish branch over Loch Etive, with a roadway, but clearances do not allow simultaneous passage of rail and road traffic.

Successful Summer Tourist Season for Britain.—Efforts to attract tourists to Britain resulted in 615,000 overseas visitors to the country during the eight months January to August. Of this total 307,000 were from Europe, nearly 146,000 from the U.S.A., and an estimated 140,000 from the British Commonwealth. Announcing these figures Sir Alexander Maxwell, Chairman of the British Travel & Holidays Association states that tourist traffic has continued at a record high level during the post-Coronation period, largely visitors who could not come for the actual celebrations but have been keen to see the setting. Tourist arrivals during August exceeded 114,000, an increase of 4 per cent compared with August 1952, itself a record month. The Association estimates that for the full year tourist arrivals will reach the record figure of 800,000 with earnings, including fare payments to British carriers, some £125,000,000.

British Railways, Southern Region, Lecture and Debating Society.—Among the activities of the Southern Region Lecture and Debating Society arranged for the coming Session is a brains trust to be held on Wednesday, October 21, in the Chapter House, St. Thomas Street, London Bridge, S.E.1, at 5.45. The panel will consist of Mr. M. McK. Jesper, Chief of Police, London area, Mr. W. H. F. Mepsted, Commercial Superintendent, Mr. R. E. Sinfield, Continental Superintendent, and Mr. G. Tunbridge, Estate and Rating Surveyor. The chair will be taken by Mr. F. J. Wymer, Assistant Chief Regional Officer. The Members' Night has been arranged for Tuesday, November 3, and

the Debate with the Western Region Lecture and Debating Society for Wednesday, December 16, when the subject for debate will be "That the employment of more women in responsible positions would be beneficial to British Railways."

Forthcoming Meetings

October 12 (*Mon.*).—Institute of Transport, Sussex Group, at the Royal Pavilion, Brighton, at 6.30 p.m. Paper on "Trends and Influence in Transport Charges," by Mr. J. R. Pike.

October 13 (*Tue.*).—South Wales & Monmouthshire Railways & Docks Lecture & Debating Society, in the Angel Hotel, Westgate Street, Cardiff, at 6.30 p.m. Paper on "Some Southern Region Problems," by Mr. C. P. Hopkins, Chief Regional Officer, Southern Region.

October 13 (*Tue.*).—Institute of Transport, Metropolitan Section, Essex Group. At the Shire Hall, Chelmsford. Paper on "London, Tilbury & Southend Railway," by Mr. W. O. Reynolds.

October 13 (*Tue.*).—Institute of Transport, Metropolitan Graduate & Student Society, at 80, Portland Place, London, W.1, at 5.30 for 6 p.m. Paper on "New Zealand Inter-Island Steamer Express Service," by Mr. J. P. Barrett.

October 14 (*Wed.*).—Permanent Way Institution, at the Railway Executive Headquarters, 222, Marylebone Road, N.W.1, at 6.30 p.m. Paper on "Our Visit to Belgium Railways" by Messrs. J. H. Bedwell and H. Bone.

October 14 (*Wed.*).—The Newcomen Society, in the Lecture Theatre, Science Museum, Exhibition Road, South Kensington, S.W.7, at 5.30 p.m. Papers on "Report on Railways in England in 1826-27," by Messrs. Carl von Oeynhausen and Heinrich von Decheu, translated and reviewed by Mr. E. A. Forward, and "The First Watt Type Engine in Denmark," by Mr. H. H. Mansa.

October 14 (*Wed.*).—Institute of Transport, Beds., Cambs., and Hunts. Section, at the Dorothy Cafe, Cambridge, at 6.45 for 7 p.m. Annual Dinner and visit of Mr. C. K. Bird, a Vice-President of the Institute.

October 15 (*Thu.*).—British Railways, Western Region, Lecture & Debating Society, in the Headquarters Staff Dining Club, Bishop's Bridge Road, Paddington, W.2, at 5.45 p.m. Paper on "History and Work of the British Transport Commission Police," by Mr. W. B. Richards, Chief Officer, Police, British Transport Commission.

October 15 (*Thu.*).—Institute of Transport, Northern Ireland Section, at 21, Linenhall Street, Belfast, at 6 p.m. Debate with Irish Section: "That the Restriction of Private Transport to a Radius of Twenty-five miles is in the Interest of Irish Economy."

October 15 (*Thu.*).—Institute of Transport, Portsmouth Group, at the Chamber of Commerce, at 6.30 p.m. Paper on "The Control and Working of a Large Passenger Station," by Mr. L. J. Cox.

October 15 (*Thu.*).—Institute of Transport, South Western Section, at the City Transport Offices, Plymouth, at 7 p.m. Paper on "Transport Users' Consultative Committees," by Mr. M. A. Cameron, Principal Traffic Officer, British Transport Commission.

October 16 (*Fri.*).—Institute of Traffic Administration, Merseyside Centre, at the Stork Hotel, Liverpool, at 7.30 p.m. Paper on "Denationalisation as is Effects 'C' Licence Operation," by Mr. E. Webster, Transport Superintendent of the English Electric Co. Ltd., and D. Napier & Son Ltd., Liverpool.

October 17 (*Sat.*).—Stephenson Locomotive Society, Leeds Centre, at the Y.M.C.A., Albion Place, at 2.30 p.m. Talk about Sir Edward Watkins, the Railway Pioneer, by Mr. C. Hutton.

October 19 (*Mon.*).—Historical Model Railway Society, at the headquarters of the Stephenson Locomotive Society, 32, Russell Road, London, W.14, at 7 p.m. Illustrated talk "More About the London and Blackwall Railway," by Mr. H. F. Hilton.

October 19 (*Mon.*).—Institute of Traffic Administration, Manchester Centre, at the Carlton Hotel, Manchester, at 7.15 p.m. Paper on "Railway Claims," by Mr. J. Fletcher.

October 21 (*Wed.*).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, S.W.1, at 5.30 p.m. Paper on "Production of Steel Wagons," by Mr. W. Vandy.

October 21 (*Wed.*).—Institution of Railway Signal Engineers at the Institution of Electrical Engineers, Savoy Place, London, W.C.2, at 6 p.m. (tea at 5.30 p.m.). Paper on "Modern Signalling Developments on the Swiss Railways," by Dr. Karl Oehler.

Railway Stock Market

Stock markets have been very active with recorded dealings at their highest level since May, 1951, and strong demand for industrial shares the outstanding feature. British Funds were firm, helped by the big success of the Exchequer stock issue and by the widespread assumption that before long the bank rate may be further reduced to 3 per cent. The buying of industrial shares has been influenced considerably by the prevailing view that leading industrial companies will modify the very conservative dividend policy which has been followed since the war. An indication of the tendency to give shareholders a little more has been the raising of the Imperial Chemical interim from 5 to 6 per cent.

If the bank rate were lowered further to 3 per cent, it would mean an upward adjustment in prices of British Funds and leading industrial shares would also go on a lower yield basis as well. Another influence on industrial shares is the take-over deals which continue to feature company news, and which emphasise that at current market prices many shares are much undervalued in relation to their break-up value based on the present day value of property and other assets.

With business mainly in industrial shares and British Funds, it is perhaps not surprising that only moderate attention has been given to foreign rails. A feature has been speculative buying of Manila Railway debentures. This is due not to any revival of talk of a pending settlement in respect of the company's holding of Manila Railroad bonds, but to the knowledge that when there is a settlement of interest arrears Manila Railway debentures will be worth well over their current levels. The "A" debentures have risen to 81 at the time of going to press, while the £1 preference shares changed hands up to 8s. 9d. and the 1s. ordinary shares were dealt in around 3s. 10½d.

Dorada ordinary stock marked 59, Egyptian Delta 5 per cent debentures around 19½, while Chilian Northern first debentures transferred up to 31 and Guayaquil and Quito first bonds around 39½.

In Indian stocks, Barsi have been dealt in up to 118⅜. Nyasaland Railways 3½ per cent debentures were 75. Among home stocks, Central London guaranteed marked 82 and Metropolitan Assented 45½.

In other directions, Antofagasta ordinary and preference have been steady at 9¼ and 47½ respectively, following publication of the full results and the chairman's annual statement. The 5 per cent debentures changed hands up to 78.

Mexican Central "A" debentures were 85, and elsewhere, French railway sterling bonds held recent gains, Midi 4½ per cents being 84. San Paulo units were 5s. 10½d.

United of Havana issues remained active in anticipation of the next news of the take-over developments. The 4 per cent "A" were 91, the 4 per cent "B" 90½, the 5 per cent second income stock 36½ and the consolidated stock 5⅞.

Canadian Pacifics were $43, the 4 per cent preference £70¼ and the 4 per cent debentures £86¼. White Pass no par value shares changed hands around $27⅛ and the convertible debentures were £98. Nitrate shares were 21s. 3d.

Road transport shares displayed their usual firmness, and where changed, moved in favour of holders. West Riding were 37s., Southdown 32s., Lancashire Transport 50s. xd., while Rhondda Transport marked 25s. 3d. xd. and Ribble Motor Services 37s. 6d. B.E.T. deferred 5s. units were 31s. 3d.

Engineering and kindred shares reflected the upward trend in markets, though generally the volume of business was not much larger as there appears to be a widespread tendency for buyers to await the terms of the first of the big steel company issues.

The prevailing view is that now markets have developed strength, it is unlikely ordinary shares of the leading steel companies will be issued at prices showing yields of over 6½ per cent, and possibly only 6½ per cent. After an earlier rise, Guest Keen have eased to 52s. 4½d. at the time of going to press. Tube Investments were active up to 65s. 3d. in the belief that the acquisition of Round Oak Steel, which requires over £5,000,000, will be financed out of Tube Investments' resources and will not require raising addition capital. Babcock & Wilcox have been outstanding with an advance to 71s. 6d. on the expected big success of the £4,000,000 debenture issue, the coming 50 per cent share bonus, and the assumption in the market that the total dividend for the year will show a slightly higher cash distribution for shareholders. Vickers at 50s. 6d. have not quite held best prices. Ruston & Hornsby were 40s. 6d.

Among shares of locomotive builders and engineers, Beyer Peacock were 31s. 3d. with the new shares 3s. 10½d. premium over the issue price of 27s. 6d. Charles Roberts 5s. shares strengthened to 16s. 10½d. Hurst Nelson were 43s., North British Locomotive 12s. 9d. and Birmingham Carriage 27s. 9d. Vulcan Foundry strengthened to 22s. 3d. Gloucester Wagon 10s. shares were 15s. 3d. and Wagon Repairs 5s. shares 15s. 3d.